

Northern California's Computer Magazine

Sept. 20, 1993 • #113

**FREE**

# MICROTIMES

SPECIAL SECTION

MultiMedia  
& Beyond

Centris MultiMedia;

Amiga Video Tools;

Street Art At  
SF State

Donna Auguste: "We wanted to give people something that's very easy to use, very fluid and very mobile, but also very adaptive, so it becomes more a reflection of the way you do things."

DONNA  
AUGUSTE AND  
STEVE CAPPS  
OF THE  
NEWTON  
SOFTWARE  
TEAM

# Newton

VERY PERSONAL COMPUTING





Authorized Reseller

# Apple® Macintosh® Computers and Accessories



Authorized Reseller

## Newton® MessagePad

Introducing the Newton® MessagePad™ communications assistant from Apple Computer, Inc. Newton makes it easy to communicate and organize information.

- Built-in calendar, address book, notepad and communications capabilities
- Lets you send a fax, receive a page, print and "beam" to another Newton™
- Send and receive electronic mail
- Works with PCs and Apple® Macintosh® computers\*
- Additional software and storage available
- Easy and fun to use
- Fits in your pocket, weighs under 1 pound
- Battery powered
- Fax/modem

Message Card and Newton Connection software sold separately.  
#1812442



**\$899**

## Apple® Macintosh® PowerBook Duo™ 210 4/80

The Apple® Macintosh® PowerBook Duo™ 210 computer gives you the best of both worlds, desktop expandability and peripherals, plus PowerBook convenience and portability. You can also use it with a unique desktop docking system. The Macintosh PowerBook Duo 210 comes with 4 megabytes of RAM (expandable to 12), an 80 megabyte internal hard disk drive, and two expansion slots.  
#1738339



**\$1299**

## Apple® Macintosh® PowerBook Duo™ 230 4/80

The Apple® Macintosh® PowerBook Duo™ 230 computer is Apple's highest performance PowerBook docking system, offering you the convenience of a notebook computer plus the unique ability to take advantage of your desktop computer's files, storage, and accessories. 68030 33MHz CPU • 80MB Hard Drive • 4MB of RAM Expandable to 24MB 2 Expansion Slots: 1 for Modem/ 1 for RAM • Serial Port Docking Connector Power Adapter Port Modem Port 9" Backlit Supertwist Display Nickel-Hydrate Battery Built-in AppleTalk  
#1738340



**\$1599**

## Apple® Macintosh® Color PowerBook™ 165c 4/80

With the PowerBook™ 165c, the impact and appeal of a bright, vivid color display is now available on a portable Macintosh computer. It delivers the processing speed, flexibility, and convenience you need all in a package that weighs just seven pounds and fits into a briefcase. It also features a backlit passive-matrix display that gives you 256 brilliant colors. You can also connect to a larger display for more work space.  
#1767393



**\$1799**

## Apple® PowerBook™ 145B 4/40

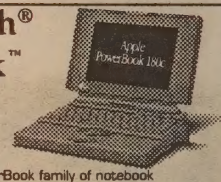
The Apple® PowerBook™ 145B computer is designed for those who want solid Macintosh® performance and flexibility in a convenient, take-it-wherever-you-work notebook computer. Although it fits easily in your briefcase, this innovative notebook computer offers the full power and ease of Macintosh computing. The PowerBook 145B makes it easy to work on the road or on your desk. The sleek, ergonomic design includes standard-size keyboard, integrated trackball and palm rest, and a bright, full page-width display. 4MB RAM • 40MB Hard Drive  
#1801998



**\$1299**

## Apple® Macintosh® Color Powerbook™ 180C 4/80

The sharpness and clarity of an active-matrix color display makes the Apple® PowerBook™ 180C computer the most powerful and colorful member of the PowerBook family of notebook computers. The PowerBook 180C is perfect for dramatic one-on-one client presentations. The PowerBook 180C comes standard with 4 megabytes of RAM, expandable to 14 megabytes, so you can work on multiple applications simultaneously. A 68030 microprocessor running at 33 megahertz and a powerful math coprocessor let you handle the most demanding applications.  
#1802014



**\$2999**

## Apple® Macintosh® LC III 4/80

The Apple® Macintosh® LC III is the most powerful member of the Macintosh LC line of desktop personal computers. It delivers the out-standing performance and versatility you need—all in a slim-line, modular design and at an affordable price.  
#1765793



**\$1199**

## Apple® Macintosh® Color Classic® 4/80

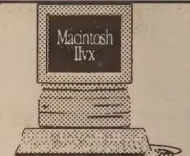
The Apple® Macintosh® Color Classic® computer combines the performance and affordability of the Apple Macintosh Classic II with the ability to display up to 256 colors on its built-in Trinitron screen.  
• 4MB of RAM, expandable to 10MB  
• 40MB, 80MB, or 160MB internal hard disk  
• Built-in LocalTalk™ connection  
• AppleTalk™ networking software  
• Easy to transport  
• A member of the Classic Macintosh product line  
#1767430



**\$1129**

## Apple® Macintosh® IIfx™ 5/80 w/CD-ROM

The Macintosh® IIfx™ is ideal for users who seek faster performance, more memory, and future expandability. System memory can be expanded from 4 to 20 megabytes. It comes equipped with a math coprocessor and cache card for increased speed. And it can be equipped with an internal CD-ROM drive for instant access to thousands of volumes of information stored on CD.  
#1738498



**\$1777**

## Apple® Macintosh® Centris™ 610 8/230 w/Apple® CD-ROM

Now there's an affordable way to take advantage of the power of the 68040 microprocessor: the Apple® Macintosh® Centris™ 610 desktop personal computer. Like all Macintosh Centris computers, the Macintosh Centris 610 delivers the high performance you need to get the job done in a demanding environment, while giving you the flexibility to configure your system to meet your needs today and tomorrow.  
Monitor and Keyboard Not Included  
#1767555



**\$2299**

## Apple® Macintosh® Centris™ 650 8/230 w/CD-ROM

Designed for performance and flexibility, the Apple® Macintosh® Centris™ is the most expandable Macintosh Centris computer. Like all Macintosh Centris models, the Macintosh Centris 650 is ideal for mainstream business and professional users. The Macintosh Centris 650 offers the speed and power you need to get the job done in the most demanding environments, and the flexibility to grow as your needs change.  
Monitor and Keyboard Not Included  
#1767636



**\$2699**

## Apple® Macintosh® Centris™ 660AV 8/230

With an innovative architecture that delivers new capabilities in telecommunications, video, and speech, the Apple® Macintosh® Centris™ 660AV computer helps you work and communicate more effectively than ever before. The Macintosh Centris 660AV combines the horsepower of a 25-megahertz 68040 microprocessor with a 55-megahertz digital signal processor (DSP) to achieve outstanding performance. The DSP handles telecommunications, speech, and audio functions, allowing the 68040 processor to handle other tasks, thereby increasing the total system performance.  
#1820317



**\$2399**

## Apple® StyleWriter® II Printer

The Apple® StyleWriter® II printer, laser-quality printing at an affordable price.  
• 360 dots per inch quality  
• Multipurpose tray holds up to 100 sheets of paper and 15 envelopes  
• Comes with 39 scalable TrueType™ fonts  
• GreyShare™ driver software for gray-scale printing  
• All Macintosh products are designed to work together  
#1758221



**\$299**

**Fry's Electronics**  
Home of Fast, Friendly, Courteous Service  
Prices good thru October 11, 1993  
Limit Rights Reserved  
Not Responsible For Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD

**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**  
600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



**INCREDIBLE SELECTION**

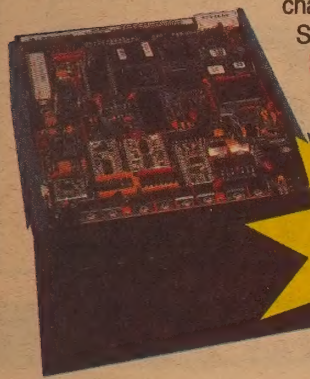
# DISK DRIVE DEPOT

**GREAT PRICES**

**PROFESSIONAL SERVICE**

## Micropolis Monster

Files just keep getting bigger and bigger! How much space is free on your drive? Don't worry! Our prices on really big drives are getting lower and lower! The Depot's special purchase offers you this **NEW, One Gigabyte, SCSI-II Micropolis 1598-15 drive** for only **\$895!** With a 14.5ms access time and 1GB formatted storage space this internal drive is perfect for those huge spreadsheet or graphic files. Drop in and pick up your drive today! The supply is limited.



**NEW  
SCSI-II  
\$895**

## Brand New, Full-Warranty Seagate's Screamer!

There aren't many good quality, reliable 2 gigabyte disk drives. Seagate's ST42100 model is an exception. This drive design has evolved from the CDC design labs which were purchased by Seagate. In addition to its large storage capacity and decent access time, the 42100 features high-sustained and burst data transfer rates. This drive is a rock solid choice for space hungry applications like workstation imaging and graphics.

- 1900MB+ after format • 13ms access time • Fast SCSI-II interface • **DISCOUNT PRICE \$1695!**
- External kit for SUN/MAC/IBM \$1795 • Kit with CSC VESA SCSI-II controller \$1795!



**as low as  
\$1695!**

## CD-ROM Drive Explosion

You asked for them - we found them at bargain prices. The Disk Drive Depot now has a complete selection of CD-ROM drives in stock. These pictured photo CD compatible NEC CDR 73 and 83 CD-ROMs start at an amazingly low \$189 for the internal model. You need a CD drive to take advantage of all the latest software. We have multimedia CD-ROMs starting at **\$159!** Multi-session, MPC, multi-spin, all the latest and fastest CD-ROM technology can be yours! Call or drop by the Depot today and pick one from our huge selection.



**CD-ROMs  
AS LOW AS  
\$159!**

## Adobe Photoshop 2.0 for \$179!

The premium Macintosh photographic image manipulation and design tool! Adobe Type Manager is included! The Depot has a limited number at the unheard of price of **\$179!** This absurd price includes a new ADB trackball. After registration, upgrades are available from Adobe. This is a very limited offer! Order today!



## Mac-Compatible SCSI OCR Scanners

Tired of typing? Disk Drive Depot makes OCR technology affordable! Abaton uses modern one-bit technology coupled with OmniType software to create the ideal document scanning package for Macintosh applications. Take advantage of our insane price on a brand new, factory sealed Abaton SCSI scanner and OCR software bundle: List Price: \$995. **DDD Price: \$295!** Buy now and we'll throw in a free automatic document feeder while supplies last! Call today while the limited supplies last!!



**\$295**

All drives (both new and refurbished) are backed by the Disk Drive Depot's fast turnaround warranty. Quantities limited on most items, and prices are subject to change without notice. Trademarks listed are property of their respective owners.

# DISK DRIVE DEPOT

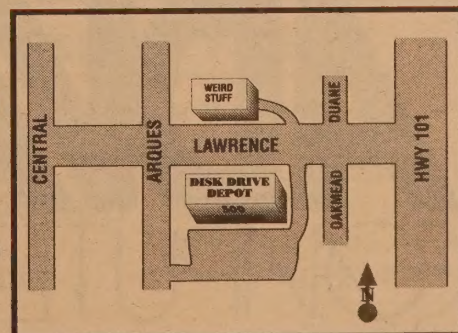
**(408) 738-3895**

**FAX (408) 738-3896**

**500 Lawrence Expressway  
Sunnyvale, CA 94086**

**STORE HOURS:  
Monday-Friday 10:30am to 6:30pm, Saturday 11am to 6pm**

Stop in and visit our retail showroom on Lawrence Expressway, opposite from Weird Stuff (on the left side of the street). Our service and selection are second to none.





# TENS THOUSANDS

# OF OUR SYSTEMS SOLD SINCE 1983 ARE STILL IN USE

## TAKE ANY COMPUTER...



and we will install a 2 Gigabyte HD, 2GB Tape Back-up, 37" Monitor, CD Rom, Novell Software, UNIX Software, D Software, and any configuration you want.

**PLEASE CALL**

## WE CAN CONFIGURE:

- UP TO 96 MB MEMORY
- 1 GB UP TO 50 GB HARD DRIVES
- 14" UP TO 37" MONITOR
- SUPER FAST VIDEO CARDS
- SCO UNIX, NOVELL, AUTOCAD, OS/2, DOS, 3COM

**CALL REGARDING ANY  
CONFIGURATION & BEST PRICE**

## WORLD'S MOST POWERFUL & FAST COMPUTERS!

- 1) AT&T Chooses SAM Workstations Over Gateway 2000!
- 2) Apple Buys SAM Workstations!
- 3) Hewlett Packard & Sun Engineers Buy SAM Workstations!
- 4) Rated As One Of The Best File Servers With Detachable 1.2 Gigabyte Hard Drives By Leading Network Engineers!
- 5) The Fastest Engineering Workstation For Software Development & CAD Applications!
- 6) 10 Years In Silicon Valley!
- 7) Symantec, Scitor, Veritas & Many More Companies Have Become Giants In Software..They Have Our Computers & Workstations!

## NOTEBOOK

**486-33**

**w/200 MB HARD DRIVE**

**\$2299**

**TOSHIBA, APPLE, NEW, A.R. & MORE  
ALL AVAILABLE**

**WORLD'S  
BEST  
PRICE!**

**\$990**

**ACS 486-33 MHz**

- 4MB RAM Expandable to 32MB On Board
- 120 MB, 16ms Hard Drive
- 1.2 MB, 5 1/4" Floppy Drive
- 1.1 Interleave 2 Hard/2 Floppy Drive Controller
- 2 Serial, 1 Parallel, 1 Game Port
- 16-Bit SVGA Card
- 14" SVGA Color, 1024x768, 0.28mm Dot Pitch Display
- Clock/Calendar with Battery Back-up
- 8 Expansion Slots
- 3 Button, Hi-Resolution Serial Mouse

## SOFTWARE LOWEST & BEST PRICES

**UNIX•ORACLE•INFORMIX•SCO-ALL APPLICATIONS•  
1,2,3 FOR UNIX•WORDPERFECT FOR UNIX•Q & A  
AUTOCAD R.12•NOVELL•3COM•LANTASTIC•BANYAN  
•COREL DRAW•FRAMEMAKER•D BASE IV•  
MS WORD•BORLAND**

## MONITORS

### NANAO

|              |        |
|--------------|--------|
| F550i .....  | \$1090 |
| F340in ..... | \$730  |
| F750i .....  | \$2090 |

### NEC

|            |        |
|------------|--------|
| 4FGE ..... | \$734  |
| 5FGE ..... | \$1340 |
| 6FG .....  | \$2390 |

### MAG

|             |        |
|-------------|--------|
| MX17F ..... | \$1065 |
| MX15F ..... | \$580  |

### SONY

|                 |       |
|-----------------|-------|
| CDP 1430 .....  | \$595 |
| CDP 1640S ..... | \$990 |

## LASER PRINTERS

### HP LASER IV

**\$1349**

**IBM•FUJITSU•APPLE•QUME•  
EPSON•QMS•PANASONIC•  
NEC•OKIDATA**

## PLOTTERS/ DIGITIZERS

Summa Sketch ..... \$325  
Calcomp .... **BEST PRICE**

**HITACHI•ROLAND•KURTA  
MICROTEK•LOGITECH•HP  
ALL PLOTTERS  
& DIGITIZERS**

# ADVANCE COMPUTER SYSTEMS

**Delivery & Installation Available  
3 LOCATIONS TO SERVE YOU**

**SUNNYVALE** - 665 GRAPE AVE. (408) 732-6200, FAX: (408) 749-9449  
**WALNUT CREEK** - 1987 N. MAIN ST. (510) 945-8011, FAX: (510) 945-4941  
**SAN FRANCISCO** - 1231 MARKET ST. (415) 552-2902, FAX: (415) 703-6217

- (A) Prices subject to change w/o notice
- (B) Financing Available
- (C) Not responsible for typo error
- (D) Installation Extra
- (E) Subject to stock on hand
- (F) Prices vary at stores
- (G) Toner extra
- (H) Visa, mastercard



# PENTIUM SYSTEM STARTS AT \$1999...TAKING ORDERS

BASIC SYSTEM • 1.2 Floppy • 101 Keyboard • Case...Fastest Computer In The World! IBM Compatible

## Used By Santa Cruz Operation-



The world's largest UNIX software developer-to exhibit their software at UNIXFORUM, Washington, DC.  
THAT IS HOW GOOD OUR COMPUTERS ARE!

## COLOR PORTABLE PENTIUM CHIP

- Up to 66 GIGA Hard Drive & CD-ROM
- Up to 96 MB RAM
- Good for UNIX, NOVELL, DOS, OS/2
- Color

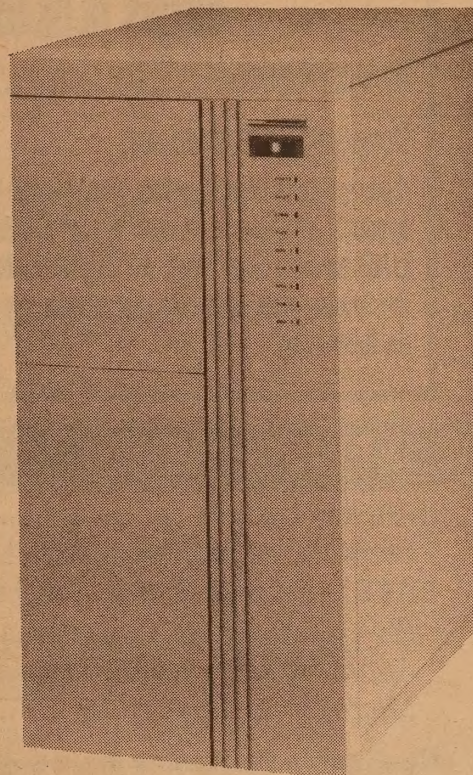
**CALL FOR PRICE**



486 EISA/ISA/LOCAL BUS PORTABLE

## SAM WORKSTATION

- Pentium CPU
- 1MB Cache
- 32 MB Memory Expandable To 1 Gigabyte
- 20"/37" Monitor
- 1280x1024 SVGA Card LB
- Auto CAD
- 32 Bit Network Card
- Digitizer/Plotter
- Multimedia
- SCSI Cache 16MB
- 2.2 Gigabyte SCSI Hard Drive Configured (Expandable To 50 Gigabyte)
- 2 Gigabyte Tape Expandable To 50 Giga
- Server Case
- UNIX/NOVELL/OS-2/ DOS/3COM
- Windows Nt
- Color Printer



- Document Imaging
- 32 Bit Video Card
- Color Laser Printer/Scanner
- Ventura, Gem Photo Lab
- PageMaker
- Photoshop
- Erasable Optical Drive

## FILE SERVER GRAPHICS WORKSTATION

# ADVANCE

COMPUTER SYSTEMS

### 3 LOCATIONS TO SERVE YOU

**SUNNYVALE**  
665 Grape Ave.  
(408) 732-6200  
Fax: (408) 749-9449

**WALNUT CREEK**  
1987 N. Main St  
(510) 945-8011  
Fax: (510) 945-4941

**SAN FRANCISCO**  
1231 Market St.  
(Inside Ramada Inn  
Mezzanine Floor)  
(415) 552-2902  
Fax: (415) 703-6217

Leasing & Financing Available



## TABLE OF CONTENTS

### A NOTE FROM THE EDITORS

Nine years ago, Apple changed computing forever with the Macintosh. Now, with the release of the long-awaited Newton, they're hoping to repeat or surpass that feat with a new tool for even more of the rest of us. We'll be talking about these devices quite a lot in the months to come, and we hope you find this month's visit with some of Newton's creators interesting.

—ME

### MICRO MARKET PLACE

A SPECIAL ADVERTISING SECTION FOR BAY AREA COMPUTER BUYERS STARTS ON PAGE 96

### COVER STORY

## Newton: Very Personal Computing Pocket-Sized MessagePad Adapts To Its Users

By Mary Eisenhart ..... 82

Cover photo: Michael Jay

Apple's Newton MessagePad, which made its long-awaited debut on August 2, promises to change the way people use computers yet again. In this month's cover story, we visit Donna Auguste and Steve Capps of the Newton software team, and examine the current and future state of the technology.

### NEWS & VIEWS

|                                               |    |
|-----------------------------------------------|----|
| <b>Industry Insight</b> By Paul Hoffman ..... | 17 |
| PowerPC's Early Arrival .....                 | 17 |
| AT&T Merges EO, GO .....                      | 18 |
| IBM's New Abra Computer .....                 | 20 |
| Apple's System Enabler Updated .....          | 20 |
| MicroTimes Stock Index .....                  | 23 |

|                                                 |    |
|-------------------------------------------------|----|
| <b>Realizable Fantasies</b> By Jim Warren ..... | 24 |
|-------------------------------------------------|----|

Software patents: the courts interpret the law.

|                                                  |    |
|--------------------------------------------------|----|
| <b>From The Frontier</b> By Mitchell Kapor ..... | 29 |
|--------------------------------------------------|----|

Hackers are not hoods, but some criminals do use computers.

|                                                     |     |
|-----------------------------------------------------|-----|
| <b>Dvorak's Last Column</b> By John C. Dvorak ..... | 322 |
|-----------------------------------------------------|-----|

Weird Documents and Odd Humor on the Internet.

### BUSINESS SOLUTIONS

|                                                    |    |
|----------------------------------------------------|----|
| <b>Pens &amp; Palmtops</b> By Mitsu Hadeishi ..... | 32 |
| Subnotebooks: small machines, big power.           |    |

|                                 |    |
|---------------------------------|----|
| <b>Laptops</b> By Ed Kahn ..... | 38 |
|---------------------------------|----|

Photography for the laptop, NEC Ultralite Versa series.

|                                   |    |
|-----------------------------------|----|
| <b>UNIX</b> By Bennett Falk ..... | 44 |
|-----------------------------------|----|

The (Unbearable) Detrivialization of Ping.

|                            |    |
|----------------------------|----|
| <b>LANs</b> By Yacco ..... | 49 |
|----------------------------|----|

Scheduling workgroups across Windows and DOS environments.

|                                                                                          |    |
|------------------------------------------------------------------------------------------|----|
| <b>Some Current Developments In Telecommuting And Telework</b> By Robert Moskowitz ..... | 52 |
|------------------------------------------------------------------------------------------|----|

New study examines the requirements of "Travel-For-Work."

### Editorial

(510) 934-3700

### Advertising

(510) 934-3700 (408) 244-4400

**Developers And Programmers—To Incorporate Or Not?** By David A. Simon, CPA, and Jennifer R. Cherniss .... 58  
 Tax benefits, pitfalls, and options.

### Reengineering The Modern Office

By Steve Kaplan ..... 66

Suggestions for increasing the productivity of the networked office.

### Telephone Management With A PC

By Ed Kahn ..... 75

YourWay offers excellent telephone management in Windows.

### FEATURES

|                                        |    |
|----------------------------------------|----|
| <b>BMUG</b> By David Morgenstern ..... | 91 |
|----------------------------------------|----|

The BMUG Report from Boston Macworld Expo.

### Project Gutenberg: Free "Books" Online

By Kevin M. Savetz ..... 112

Offering electronic versions of public-domain literature across the networks.

|                                                |     |
|------------------------------------------------|-----|
| <b>Help On The Way</b> By Jiri Weiss, Jr. .... | 120 |
|------------------------------------------------|-----|

Computers streamline aid to the homeless.

|                                                      |     |
|------------------------------------------------------|-----|
| <b>Claris At Work, Again</b> By Mike Markowitz ..... | 124 |
|------------------------------------------------------|-----|

ClarisWorks 2.0 for the Macintosh adds new strength to integrated software.

### OS/2: Point & Drag, Drag & Drop

By Fabian Pascal ..... 126

Organizing your OS/2 Desktop.

### 1-2-3 for Windows Release 4

By Woody Liswood ..... 130

A significantly improved Lotus spreadsheet called 1-2-3 for Windows Release 4.

### Volunteers Across The Networks

By John S. Quarterman and Smoot Carl-Mitchell ..... 151

Volunteers have been crucial in building and managing most of the open, distributed networks.

### PRODUCT SPOTLIGHT

|                              |     |
|------------------------------|-----|
| <b>Product Updates</b> ..... | 179 |
|------------------------------|-----|

### New Products

#### PC Hardware

|                                           |     |
|-------------------------------------------|-----|
| <b>Ultimate Computer Protection</b> ..... | 159 |
|-------------------------------------------|-----|

|                              |     |
|------------------------------|-----|
| <b>PC Ener-g-Saver</b> ..... | 159 |
|------------------------------|-----|

#### Printers and Scanners

|                                     |     |
|-------------------------------------|-----|
| <b>Tamarack Color Scanner</b> ..... | 159 |
|-------------------------------------|-----|

|                                         |     |
|-----------------------------------------|-----|
| <b>Okidata Microline Printers</b> ..... | 160 |
|-----------------------------------------|-----|

#### UNIX Hardware

|                                           |     |
|-------------------------------------------|-----|
| <b>Sun NeWSprinter 20 Hi-Feeder</b> ..... | 160 |
|-------------------------------------------|-----|

|                                              |     |
|----------------------------------------------|-----|
| <b>Marrix dt SPARCstation 10 Clone</b> ..... | 160 |
|----------------------------------------------|-----|

|                                 |     |
|---------------------------------|-----|
| <b>Acer PowerPortable</b> ..... | 160 |
|---------------------------------|-----|



# AMS Challenged The Limits Of The Ordinary PC To Give You The Best Value Available Anywhere !



At AMS great wasn't good enough for our customers. We challenged the limits of the PC market to develop the best values in computers. Brands like IBM, Intel, AMI, Conner' Maxtor, Sony etc... . We took the best and carefully engineered them to out perform the rest of the competi-tion. And the result are in with AMS clearly leading the pack. That's why AMS won WINDOWS SOURCES Magazine's EXPERT PICK's, March '93. AMS offers the best value on the best quality computers available any-where. If you want the best in computers call AMS today!

## Financing Available !

Ask about our convenient credit plan.

- Fast credit decisions
- Convenient terms
- Low monthly payments

90 days  
same as  
cash !

EXPERTS'  
**Windows**  
P I C K

American Multisystems

**InfoGOLD 486-50**

MARCH 1993

**Windows Sources**

The Magazine for Windows Experts

"With brilliant graph-ics performance, the InfoGOLD 486-50 makes one smart choice as Windows workstation"

## BACK TO SCHOOL SPECIAL

**486DX2-66 Mhz Computer System**  
\$ 1265 or \$ 42/Month

**486DX-33 Mhz Computer System**  
\$ 1055 or \$ 35/Month

**386DX-40 Mhz Computer System**  
\$ 805 or \$ 35/Month

**System Includes:** ♦ 4Mb Memory ♦ 1.44Mb Floppy Drive ♦ 14" S-VGA Monitor (0.39) ♦ 1:1 FD/HD Controller w/2S,P,G ♦ Mouse ♦ Singular Case with 101 Keyboard ♦ 120Mb Hard Drive

## BEST VALUE

|                                |                             |       |       |
|--------------------------------|-----------------------------|-------|-------|
|                                | 120Mb                       | 245Mb | 340Mb |
| <b>486DX2-66 MHz Local Bus</b> | <b>\$1360 / 1415 / 1505</b> |       |       |
| <b>486DX-33 MHz Local Bus</b>  | <b>\$1170 / 1225 / 1315</b> |       |       |

**Free Diamond Speedstar Pro VLB Upgrade !!**

**System Includes:**

- ♦ 4Mb Memory ♦ Fast Cache ♦ 1.44Mb TEAC Floppy Disk Drive
- ♦ Local Bus Controller Card ♦ Local Bus S-VGA Card w/1Mb
- ♦ 14" S-VGA Monitor ♦ 101Enhanced Keyboard
- ♦ DeLuxe Mini Tower Case ♦ Microsoft Compatible Mouse

## SPECIAL LOCAL BUS SYSTEMS

|                                    |                                 |       |       |
|------------------------------------|---------------------------------|-------|-------|
|                                    | 245Mb                           | 340Mb | 540Mb |
| <b>486DX2-66 MHz PCI Local Bus</b> | <b>\$1810 / \$1876 / \$2151</b> |       |       |
| <b>PENTIUM 60Mhz Local Bus</b>     | <b>CALL</b>                     |       |       |

**System Includes:**

- ♦ 8Mb Memory ♦ Fast Cache ♦ 1.44Mb TEAC Floppy Disk Drive ♦ 1:1 FD/HD Controller w/2S,P,G ♦ Local Bus S-VGA Card ♦ 14" S-VGA Monitor ♦ 101 Enhanced Keyboard ♦ DeLuxe Mini Tower Case ♦ Microsoft Compatible Mouse

## THE "EXPERT PICK" SYSTEM FOR WINDOWS EXPERTS

**486DX2-66 MHz EISA VESA Local Bus System**  
\$3295 or \$ 91/Month

**System Includes:**

- ♦ 8Mb Memory ♦ 1.44Mb & 1.2Mb TEAC Floppy Disk Drive ♦ DTC EISA SCSI Controller Card w/4Mb Cache ♦ 1:1 FD/HD Controller w/2S,P,G ♦ Diamond Viper S-VGA Local Bus Card w/2Mb ♦ 14" S-VGA Monitor (0.28DPI) ♦ 340Mb Maxtor SCSI Hard Drive ♦ 101 Enhanced Keyboard ♦ Full Size Dual Cooling Tower Case
- ♦ Microsoft Compatible Mouse

## Upgrade options:

- VESA Local Bus IDECaching Contr
- Local Bus IDE Contr.

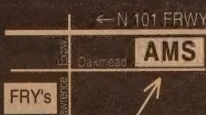
- 250Mb Tape backup
- 9600/2400 Fax/Modem

- Diamond Viper Local Bus S-VGA Card w/2Mb \$349
- Diamond Speedstar Pro Local Bus S-VGA Card w/1Mb \$109
- Sony CDU-31A CD-ROM Drive \$159

**408/524-9091**

**American Multisystems**

538 Oakmead Pkwy. , Sunnyvale California 94086



Low interest and low monthly payment financing available with 10 % down. Credit approved in 30 minutes. No interest for 90 days \* Not responsible for typos. Prices may change without notice. \* 2 scheduled payment required

**Terms and Conditions:** All prices reflect cash discount. One Year Warranty on Parts and Labor. 30 Day Satisfaction Guaranteed on all products. All returns are subject to approval. 15% restocking fee for all returns. All prices subject to change without notice. Not responsible for typos.



## TABLE OF CONTENTS

### PRODUCT SPOTLIGHT CONT.

Video Board For Sun Workstations ..... 160

Game Reviews By Mike Markowitz

KidCAD ..... 160

Printer Review

Primera Color Printer ..... 196

### RESOURCES

Calendar Of Events ..... 256

Sixth Annual Multimedia Expo ..... 256

Foresight Conference On Nanotechnology .. 256

Accounting Software Seminar ..... 256

California Computer Show & Sale ..... 256

User Group Network ..... 270

BBS Spotlight: Guns Online

Classifieds ..... 276

Index Of Advertisers By City ..... 318

Index Of Advertisers ..... 320

# MultiMedia & beyond

**Mac Centris: The Flying Workhorse Of Multimedia** By Tony Reveaux ..... 293

Apple's Centris provides a happy medium between low- and high- priced performance.

**Amiga Multimedia Tools**

By Douglas J. Nakakihara ..... 298

Cool Video Tools for capture, editing, and more.

**Multimedia 101: Artutorials: Taking Multimedia To The Streets**

By Jonathan E. .... 302

SF State Multimedia program looks at new careers in journalism.

**Computers In Painting, Sculpture, And Ceramics** By Judy Malloy ..... 308

Bridges between the virtual computer world and sensory experience.

**New Windows Video Cards**

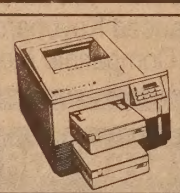
By Rich Grace ..... 315

Windows software continues to push the limits of PC hardware.

# THE PRICE LEADER

PRICE SPECIALS

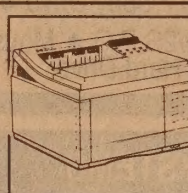
HEWLETT  
PACKARD



### HP LaserJet 4Si/4Si MX Printers High Speed-High Volume-High Quality

- Fast 17 ppm, 600x600 dpi print quality
- Two 500 sheet input and output tray full sensor
- Multiple language capability with auto switching
- Flexible connectivity with two MIO expansion slots
- Expandable and flexible - Excellent for networks
- HP LaserJet 4Si MX designed for simultaneous sharing across multiple network & computer operating systems. Supports HP-UX, SUN OS, Solaris, and SCO UNIX
- One year on-site warranty

HEWLETT  
PACKARD



### HP LaserJet 4/4M Printers

- 600 dpi print quality at a 300 dpi price
  - Resolution enhancement technology and microfine toner for superior output quality
  - Fast 8-ppm printing for complex documents
  - Outstanding language and platform flexibility
  - Full network capabilities (with options)
  - Ideal for Windows environment
  - Easy to use
  - Package with toner
- BEST PRICE**

PRICE SPECIALS

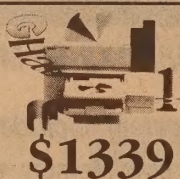
HEWLETT  
PACKARD

### HP DeskJet 1200C Printer

- High quality resolution, 600x300 dpi text and 300 dpi color
- 35 Intellifont, 10 True Type
- 2MB expandable to 26MB with SIMMS
- Color PCL5
- Print Speeds: 7ppm Fast, 6ppm Normal, 4ppm HQ

IN  
STOCK

\*Call for PostScript



\$1339

PRICE SPECIALS

HEWLETT  
PACKARD

### HP DeskJet 500/500C/550C Printers HP DeskWriter/DeskWriter C/DeskWriter 550C for Macintosh®

- Affordable laser-quality printing
- 500C & 550C allows 300 dpi color printing on plain paper and transparencies
- Wide variety of built-in fonts
- Supports Windows Applications
- 3-year limited warranty

\$299

\$399

\$599



Apple

Apple



### Apple® Macintosh® PowerBook™ 165C - 4/80

- 33MHz 68030 CPU
- 1.4MB Apple Superdrive™
- Math Coprocessor-FPU
- 256 Color Display
- 4MB RAM; 80MB HD

**Best Price**

Apple

Apple

### Apple® Macintosh Centris™ 660 AV- 8/230 W/CD

- Processor: 68040 with built-in math coprocessor
- Memory: 8MB of RAM, Expandable to 68MB
- CD-ROM drive, optional Hubus expansion card
- Two serial ports ADB port, two video-input ports, video-output ports, SCSI port
- Networking ports: Built-in LocalTalk & Ethernet

**\$2379**

Apple, the Apple logo, and Macintosh are registered trademarks of Apple Computer, Inc. Powerbook and Macintosh Centris are trademarks of Apple Computer, Inc.

• Specializing in Corporate Accounts • We Carry Name Brand Equipment and Offer Personalized Service for Our Corporate Customers • Computers • Printers • Novell Network • Compaq Apple Macintosh • Hewlett Packard • AST • Comart • PLEASE CALL FOR A CATALOG



HEWLETT  
PACKARD

EPSON

COMPAQ  
AUTHORIZED DEALER

AST

Authorized Dealer

HYUNDAI

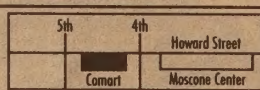
IBM

**COMART**

COMART BUSINESS SYSTEMS, INC.

843 Howard Street  
(Between 4th & 5th)  
San Francisco, CA 94103

(415) 896-1765 Fax (415) 896-2582



Store Hours:  
Mon. Thru Fri. 9:00-5:30  
Sat. 11:00-4:00



\*Upon credit approval



# WE WILL BEAT ANY ADVERTISED PRICE!!!

## NOTEBOOK 486NC33

- 4 MB RAM
- 1.44 MB Floppy Disk Drive
- 120 MB Hard Drive
- Serial/Parallel Port/Clock
- 96/24 Fax Modem
- DR DOS 6

**\$1465**

- Black Color
- 4.7 Lbs
- 10" LCD Monitor



Landmark 223 MHz Basic System

**486 DX2-66 MHz/256K VESA & EISA**

**\$895**

Landmark 223 MHz Basic System

**486 DX2-66 MHz/256K/2 Local Bus VESA**

**\$785**

Landmark 168 MHz Basic System

**486 DX-50 MHz/256K/2 Local Bus VESA**

**\$715**

Orchid Basic System Landmark 113 MHz

**486DX-33 MHz/256K/2 Local Bus VESA**

**\$625**

Landmark 113.44 MHz Basic System

**486 DX-33 MHz/256K/2 Local Bus VESA**

**\$555**

Landmark 113 MHz Basic System

**486 SX-25 MHz w/128K/2 Local Bus VESA**

**\$385**

Landmark 61 MHz Basic System OPTI

**386 DX-40 MHz/128K**

**\$299**

Landmark 21 MHz Basic System

**386 SX-25 MHz/33 MHz +\$10**

**\$245**

Landmark 136 MHz Basic System

**486DX-40 MHz/256K**

**\$585**

IBM Super System

**486SLC2-50 MHz/64K**

**\$475**

Motherboard & CPU • 1MB of Memory  
• 1.2MB or 1.4MB Floppy Drive  
2 Serial • 1 Parallel • 1 Game Port  
• Case w/ Power Supply 230W  
1:1 2HD/2FD Controller • 101 Enhanced Keyboard

### BASIC SYSTEM INCLUDES

**486DX-33 MHz 128K**

- Basic System Configuration
- 245 MB Hard Disk IDE 15ms
- 14" SVGA Monitor/DOS 6/Windows 3.1/1 MB Card
- And Mouse

**\$1145**

**486DX-50 MHz 256K**

- Basic System Configuration
- 340 MB Hard Disk IDE 15ms
- 14" SVGA Monitor/DOS 6/Windows 3.1/SVGA Card w/1 MB

**\$1365**

**486DX-40 MHz 256K**

- Basic System Configuration
- 170 MB Hard Disk IDE 15ms
- 14" SVGA Monitor
- 1.2 MB FDD
- 1.44 MB FDD
- SVGA Card w/512K

**\$1045**

**486DX2-66 MHz/256K**

- Basic System Configuration
- 340 MB Hard Disk IDE
- 4 MB RAM To 32 MB
- 14" SVGA Monitor .28
- 1 MB VGA Card
- Two Local Bus
- MS DOS 6/Win 3.1

**\$1630**

**386-40 MHz 128K**

- Basic System Configuration
- 120 MB Hard Disk IDE 15ms
- 14" SVGA Monitor
- 1.2 MB FDD
- 1.44 MB FDD
- SVGA Card w/512K/1 MB RAM

**\$759**

**386SX-33 MHz**

- Basic System Configuration
- 120 MB Hard Disk IDE
- 1 MB RAM To 16 MB
- 14" SVGA Monitor
- 512K SVGA Card

**\$659**

## MONTHLY SPECIALS

**14" SVGA MONITOR NON-INTERLACE 0.28 ... \$249**  
**386DX-40 MHz/128K/CPU BOARD ..... \$118**  
**MITSUMI CD-ROM ..... \$162**  
**170 MB IDE HARD DRIVE ..... \$169**

### HARD DRIVES

|                      |         |
|----------------------|---------|
| 80 MB IDE            | \$139   |
| 105 MB IDE           | 148     |
| 120 MB IDE           | 160     |
| 130 MB IDE 15ms      | 170     |
| 170 MB IDE 15ms      | 172     |
| 200 MB IDE           | 199     |
| 245 MB IDE 15ms      | 220     |
| 245 MB SCSI 13ms     | 269     |
| 340 MB SCSI 13ms/IDE | 378/278 |
| 540 MB IDE/SCSI      | 559     |
| 1.2 GB SCSI 2        | 850     |
| 2.4 GB SCSI Fujitsu  | 1650    |

### MONITORS

|                                |         |
|--------------------------------|---------|
| 15" MGC VESA 1280x1024 0.28 NI | \$399   |
| 14" VGA Mono/Mono Monitor      | 105/88  |
| 14" SVGA .28 (1024x768)        | 238     |
| 14" SVGA .39 (1024x768)        | 215     |
| ViewSonic 4E/V6E 0.28          | 275/295 |
| ViewSonic 7                    | 875     |
| ViewSonic 5+ 0.25              | 495     |
| NED 5FGE                       | 1099    |
| Sony 1304S                     | 535     |

### KEYBOARDS

|                           |      |
|---------------------------|------|
| Mitsumi 101 Keyboard      | \$15 |
| Keytronic 101 Keyboard    | 30   |
| Fujitsu 4700 101 Keyboard | 40   |
| Maxi-Switch 101 Keyboard  | 30   |
| BTC 101 Keyboard          | 20   |
| FullCS9000/128K           | 59   |
| 101 Russian Keyboard      | 25   |

### MOTHERBOARDS + CPU

|                                     |       |
|-------------------------------------|-------|
| 486DX-66 MHz/256K/EISA & VESA Intel | \$659 |
| 486DX-66 MHz/256K/2 VLB Intel       | 599   |
| Orchid 486DX-50 MHz/2 VLB/Intel     | 575   |
| 486DX-50 MHz/256K/2 VLB Intel       | 535   |
| 486DX-40 MHz/128K/VLB Intel         | 396   |
| 486DX-33 MHz/256K/VLB Intel         | 399   |
| 486SLC-66 MHz/64K                   | 315   |
| 486SLC-50 MHz/64K                   | 295   |
| 486SX-33 MHz/256K/CPU VLB           | 275   |
| 486SX-25 MHz/256K/CPU VLB           | 215   |
| 386SX-25/33/CPU                     | 75/80 |

### INTERFACE CARDS

|                                |      |
|--------------------------------|------|
| IDE 2FD/2HD/2S 1P 1G           | \$13 |
| IDE 2FD/2HD/2S 1P 1G Local Bus | 39   |
| IDE 4FDD/2HDD                  | 32   |
| IDE w/I/O VLB Controller       | 35   |
| UltraStor 12C                  | 190  |
| Adaptec 1542C EISA SCSI        | 190  |

### VIDEO CARDS

|                                 |     |
|---------------------------------|-----|
| Cirrus Logic w/1 MB             | 56  |
| Cirrus Logic VLB w/1 MB         | 92  |
| OAK SVGA 1 MB                   | 46  |
| Diamond Speedstar Pro ISA/VLB   | 125 |
| Diamond Stealth Viper VLB w/2MB | 369 |
| Genoa 8500 VLB w/1MB            | 105 |
| Orchid Fahrenheit/1 MB ISA/VESA | 142 |
| Orchid ProDesigner IIS w/1 MB   | 115 |
| ATI Ultra Plus 2 MB ISA         | 236 |
| 256 VGA                         | 31  |
| 512K SVGA                       | 38  |
| Trident 8900CL w/1 MB           | 58  |

### MODEMS

|                                   |      |
|-----------------------------------|------|
| 2400 Modem (9600 Send Fax Modem)  | \$27 |
| Fax Modem (9600/2400) R/S         | 43   |
| 14400/14400 Fax Modem Ext V.32S/R | 189  |
| 14400/14400 Fax Modem Int V.42    | 134  |

### PRINTERS

|                         |               |
|-------------------------|---------------|
| Panasonic KX-P1123/2023 | \$199         |
| Panasonic KX-P2124i     | 299           |
| HP 4/4M/4L              | 1365/1910/690 |
| HP Scanner 2C           | 1355          |

### FLOPPY DRIVES

|                        |         |
|------------------------|---------|
| 1.2 MB/1.44 MB Teac    | \$45/43 |
| 1.2 MB/1.44 MB Mitsumi | 42/40   |
| 1.2 MB/1.44 Teac Black | 46/44   |
| 1.2/1.44 MB Epson      | 42/40   |
| 1.2 MB/1.44 Teac Dual  | 125     |

### NETWORK

|                                      |      |
|--------------------------------------|------|
| 8 Bit Ethernet Card (NE1000 Compat)  | \$39 |
| 16 Bit Ethernet Card (10Base-T/Coax) | 56   |
| 16 Bit Ethernet Card BNC/AUI/RJ45    | 56   |
| 16 Bit (WD 8013 Compatible)          | 99   |

### CD SOFTWARE TITLES

|                                   |      |
|-----------------------------------|------|
| American Bus Phone Book-1992      | \$20 |
| Animals v1.0 DOS                  | 17   |
| Annabel's Dreams-Egypt            | 67   |
| Arthur's Teacher Trouble          | 23   |
| Atlas Pak v3.1 World/USA          | 22   |
| Authorware Star for Windows       | 48   |
| Barron's College Guide            | 22   |
| Battle Chess DOS                  | 28   |
| Beyond the Wall of Stars          | 22   |
| Beauty & Beast MPC                | 17   |
| Bring the World To Your Senses    | 14   |
| Compton's Encyclopedia MPC        | 60   |
| Corp Snapshot                     | 38   |
| Carmen San Diego DOS              | 22   |
| CD Game Pack II DOS               | 20   |
| CD Storytime DOS                  | 17   |
| ChessMaster 3000 MPC              | 17   |
| CIA World Fact Book DOS           | 22   |
| Composer Quest MPC                | 28   |
| Desert Storm MPC/MAC              | 22   |
| Dictionary of the Living World    | 26   |
| Dinosaur Adventure                | 22   |
| Family Choice/Britannica          | 19   |
| Family Doctor DOS/MAC             | 22   |
| Family Education Collections DOS  | 22   |
| Great Cities-Vol 1 DOS            | 22   |
| Geat Cities-Vol 2 DOS             | 22   |
| Guinness Disk Of Record MPC       | 22   |
| Jets & Props MPC                  | 22   |
| Jones in Fast Lane MPC            | 22   |
| Killer Truck CD-Music Library     | 17   |
| King's Quest V DOS                | 17   |
| Kodak Photo CD Access             | 17   |
| Language of the World             | 30   |
| Library of Future 1st DOS         | 45   |
| Loom From Lucas Film              | 17   |
| Lotus 123 v3.1 MPC                | 78   |
| Macmillan Dictionary For Children | 28   |
| Macromedia Action for Windows     | 28   |
| Mantis Experimental Fighter       | 17   |
| Mario is Missing/World Atlas 3.2  | 22   |
| Mavis Teaches Typing MPC          | 28   |
| Mayo Clinic Family Health         | 22   |
| Media Clips-4 PK MPC/MAC          | 38   |
| Microsoft Bookshelf MPC           | 45   |
| Microsoft Works                   | 45   |
| MIDI Music Shop                   | 17   |
| Mixed-Up Mother Goose MPC         | 17   |
| Monkey Island DOS                 | 22   |
| MPC Audibon's Birds               | 16   |
| National Geographic Mammals       | 22   |
| National Park                     | 19   |
| Ocean Digital Imagery VI DOS      | 22   |
| PC SIG 11th ED DOS                | 17   |

CALL FOR OTHER TITLES NOT LISTED

### MISC.

|                                     |       |
|-------------------------------------|-------|
| Sound Card/Kit/2 Speakers           | \$65  |
| Sound Commander FX/Speaker          | 90    |
| Sound Blaster Pro 16 Bit            | 185   |
| Sony CD ROM 31A                     | 179   |
| Mitsumi CD ROM                      | 177   |
| Toshiba CD ROM                      | 399   |
| CD ROM CD Software/5pc              | 90    |
| 250 MB Tape Back-Up DJ-20           | 175   |
| 120 MB Tape Back-Up DJ-10           | 145   |
| Microsoft Mouse/OEM                 | 89/36 |
| Logitech Mouseman/Bus (New Version) | 65    |
| Trackball Mouse                     | 30    |
| 3 Button Mouse/Black                | 9/14  |
| 230W Power Supply                   | 40    |
| Desktop AT Case/230W                | 44    |
| Mini Tower Case/230W                | 44    |
| Mid Tower Case/250W                 | 69    |
| Full Tower Case/250W/2 Fans         | 98    |
| 1 MB 70/80 ns SIMMS                 | CALL  |
| 4 MB 70/60 ns SIMMS                 | CALL  |
| 256x9 70/80 ns SIMMS                | CALL  |
| 486 and 386 CPU                     | CALL  |
| 80387 DX-40/33/25/16                | 65    |
| 80387SX/SLC                         | CALL  |

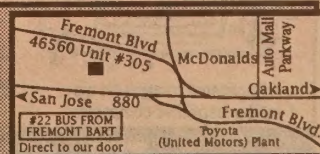
## KINGSTAR COMPUTERS, INC.

46560 FREMONT BLVD. #305, FREMONT, CA 94538 OPEN MON-FRI: 8:30-5:30 • SAT: 11:00-4:00

TEL: 510-659-8590 Fax: 510-659-8644

ONE YEAR WARRANTY PARTS & LABOR ON ALL SYSTEMS

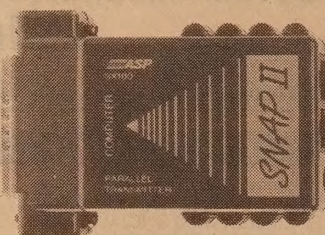
- Dealer Inquiries Welcome
- Prices Subject To Change W/O Notice
- Gov't PO's Welcome





# Hassle-Free Printer Sharing

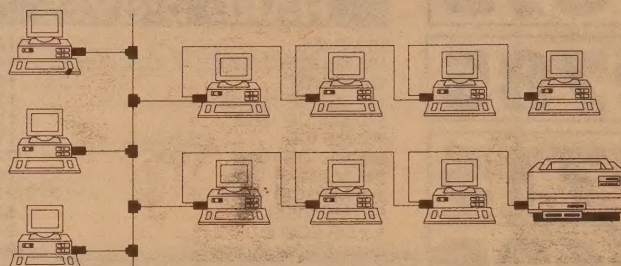
Low-cost, modular printing network for up to 20 computers



SNAP transmitter - \$59



SNAP receiver - \$69



Here's how your printer sharing network can grow with your office. It's called *SNAP*. Simply plug a transmitter to the parallel port of each computer, a receiver to the printer and connect with up to 1400 feet of modular phone cable. As you add computers to your office, you simply "snap" them in anywhere along your existing *SNAP* network. *SNAP* lets you connect up to 20 computers to a printer or printer sharing device. 3-way couplers provided by ASP let you connect the computers in any configuration. Installation is a snap!

*SNAP* requires no software and no training! What could be easier? Everyone prints as they did before. No one has to move his or her furniture. In other words, *SNAP* is an instant network!

ASP offers a complete line of printer sharing solutions. To order your *SNAP* or for a dealer near you call:

**800-445-6190**

Dept. 2HCQJ



ASP COMPUTER PRODUCTS, INC.  
160 San Gabriel Drive, Sunnyvale, CA 94086  
Phone: (408)746-2965, FAX: (408)746-2803  
European Headquarters  
La Boursidiere, RN186-BP109  
92357 LE PLESSIS ROBINSON CEDEX, FRANCE  
Phone: (33-1) 41-07-91-70, FAX: (33-1)41-07-91-79

SNAP is a trademark of ASP Computer Products, Inc.



# MICROTIMES

## CONTRIBUTORS

**Smoot Carl-Mitchell** is the managing partner of Texas Internet Consulting (TIC), and president of Matrix Information and Directory Services, Inc. (MIDS). He can be reached at [mids@tic.com](mailto:mids@tic.com).

**Jennifer Robin Cherniss** is a free-lance writer living in Berkeley.

**Kathleen Creighton** is a longtime observer of online systems. She can be reached at [casey@well.sf.ca.us](mailto:casey@well.sf.ca.us).

**John C. Dvorak** is a widely syndicated columnist and seasoned traveler to parallel universes.

**Jonathan E.** writes about world music for our sibling publication, *BAM*. He's been working with desktop multimedia since 1968.

**Bennett Falk** works in the technical support department at Sybase. His book, *The Internet Roadmap*, will be published later this year.

**Rich Grace** is a free-lance and technical writer based in Orange County. He can be reached on MCI Mail: 484-6217.

**Mitsu Hadeishi** is the founder of Open Mind, a San Diego-based software company.

**Paul Hoffman** is an industry analyst who's been writing about microcomputer technology for ten years, and is the author of several books on computer-related topics.

**Ed Kahn** is a writer and consultant based in the San Fernando Valley.

**Steve Kaplan** is president of RYNO Imaging Systems.

**Mitchell Kapor** is founder of Lotus Development and designer of Lotus 1-2-3. He is currently board chairman of the Electronic Frontier Foundation, which he co-founded.

**Mike Markowitz** works in computer support at a major Southern California university.

**David Morgenstern** is a BMUG volunteer and works in the library at San Francisco State University.

**Robert Moskowitz** is a business consultant based in Woodland Hills. He writes frequently on productivity, office automation, and technology.

**Douglas J. Nakakihara** is an Amiga zealot who works as a CPA when he's not chasing down the latest cool technology.

**Fabian Pascal** is a Palo Alto independent consultant, teacher, and writer. He can be reached on CompuServe: 73677.3306.

**John S. Quarterman** is editor of *Matrix News*, senior technical partner of Texas Internet Consulting (TIC), and secretary of Matrix Information and Directory Services, Inc. (MIDS) He can be reached at [mids@tic.com](mailto:mids@tic.com).

**Tony Reveaux**, a San Francisco-based consultant, is the editor of *Computer Publicity News*. He can be reached via the Internet ([luna@well.sf.ca.us](mailto:luna@well.sf.ca.us)) or MCIMail 290-3008.

**Kevin Savetz** is a free-lance writer based in Arcata.

**David Simon** is an Oakland-based CPA.

The scholarly **Birrell Walsh** works at KQED in San Francisco and takes an interest in languages from Sanskrit to Smalltalk.

**Jim Warren** founded assorted time-honored institutions of the computer industry and currently serves on Autodesk's board of directors.

**Jiri Weiss, Jr.** is a Berkeley-based free-lance journalist who often writes on technology issues.

**John Wolcott** is a free-lance writer for hardware and software documentation. He lives in Orange County.

**Wayne Yacco** lives in Burbank and writes about LANs and other computer-related topics for a variety of publications.

**HAVE QUESTIONS...CALL THE TECHNICAL EXPERTS**

**TRUST US... WE'RE DIFFERENT**



• Registered trademarks are by the respective companies

Apple **ZENITH** IBM **COMPAQ** Macintosh  
EPSON TOSHIBA HEWLETT PACKARD ALR

**Vertical Integration Specialists**

**GIGABYTES**

**Quality Service & Upgrades • On-Site & In-Shop Service**

**TEL: (510) 440-8032 FAX: (510) 440-9099**



# Together, We Build Your Computer

## YOUR WORKSHOP

- BUILD YOUR OWN COMPUTER WITH US.
- NO EXPERIENCE NEEDED.
- ONCE YOU PURCHASE OR BUILD, DOMINO BECOMES YOUR WORKSHOP TO TEST, COMPARE AND EXPLORE FUTURE PURCHASES.



## YOUR Neighborhood Service Center

- SUPPORT IS AROUND THE CORNER.
  - 30 LOCATIONS TO SERVE YOUR NEEDS.
  - FRIENDLY AND UNDERSTANDING.
- WE WELCOME YOU.

## DOMINO ALL-IN ONE VGA SYSTEMS

Systems come with the following features:

- 1.2MB Floppy and 1.44MB Floppy
- 120MB Hard Disk
- 2 Serial, 1 Parallel, 1 Game
- 1024 X 768 True Color SVGA Card 1MB
- VL SVGA Card for VL Systems
- Super VGA Monitor .28 (14 inch)
- Memory Upgrade per MB.....\$58<sup>00</sup>

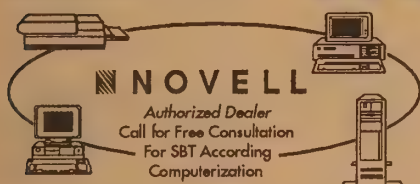
- JM 386 SX/33/2MB .....\$889<sup>00</sup>
- DOMINO 486/33/128K/4MB All BUS w/EISA IDE Controller.....\$1599<sup>00</sup>
- DOMINO 486DX2/66/128K/8MB EISA/ISA All BUS w/EISA Controller.....\$1899<sup>00</sup>

## SPECIALS

- Internal Mri FAX Modem 14.4/14.4 .....\$149<sup>00</sup>
- MRi Averkey VGA to Video Converter .....\$289<sup>00</sup>
- 386 DX-40 w/128K w/CPU Exp. to 486 .....\$128<sup>00</sup>
- Sound Card w/Headset, Speakers and Microphone .....\$58<sup>00</sup>
- Y-E Data Floppy Drive, a pair of 1.2MB and 1.44MB package .....\$80<sup>00</sup>
- 3.5" Diskettes w/Plastic Case, 10 pcs in one box .....\$85<sup>00</sup>
- Super Tower Case w/three 24 CFM Cooling Fans, 300 watt pwer supply, UL approved .....\$145<sup>00</sup>

# We Are Here To Serve You

Specialized in Novell and UNIX Networks



## DOMINO BUSINESS SOLUTION CENTERS AND NETWORK GROUPS

### BLOSSOM HILL

461 Blossom Hill Rd., Ste H-1  
408/363-1800

### OAKLAND

1238 Harrison  
510/839-1800

### BURBANK

2633 N.San Fernando Blvd.  
811/562-5112

### PLEASANTON

6700 Santa Rita, Ste. D  
510/847-1771

### CANOGA PARK

22330 Sherman Way, C7  
818/340-7490

### SUNNYVALE

1214 Apollo Way, Ste. 404-2  
408/749-0216

### FREMONT

46573 Mission Blvd.  
510/623-7181

### THOUSAND OAKS

670 E. Thousand Oaks Blvd.  
805/374-8806  
Open Sunday

## DOMINO COMPUTER CENTER

### BERKELEY/EMERYVILLE

1552 Beach St. Ste. B  
510/653-6286

### FOUNTAIN VALLEY (2 CTRS.)

11247 Slater Ave. 714/557-6666  
8908 Warner Ave. 714/375-4771

### PASADENA

2684 E. Colorado Blvd.  
818/793-0518

### SANTA ROSA

1740 Santa Rosa Ave.  
707/523-2055  
Open Sunday

### CAMPBELL

486 E. Campbell Ave. Ste 102  
408/374-7477  
Open Sunday

### HAYWARD

26222 Industrial Blvd.  
510/732-0377

### SACRAMENTO

3019 Arden Way  
916/972-0311

### SUNNYVALE

1214 Apollo Way Ste. 404-2  
408/730-1818

### CLAREMONT

975 West Foothill Blvd.  
909/374-7477

### IRVINE

17145 Von Karman Ave., Ste. 106  
714/252-8494

### SAN FRANCISCO

3400 Geary Blvd.  
415/668-9311  
Open Sunday

### TORRANCE

2535 237th St., Ste. 102  
310/325-9701  
Open Sunday by appt.

### CONCORD

11300 Burnett Ave.  
510/682-8934  
Open Sunday

### LOS ALTOS

111 Plaza North  
415/941-7778

### SAN RAFAEL

757 Lincoln Ave., Ste. 30  
415/453-8525

### VALLEJO

480 Redwood St., Ste. 41  
707/644-5055  
Open Sunday

### CULVER CITY

4911 Sepulveda Blvd.  
310/313-4540

### MILLBRAE

231 Millbrae Ave., Ste 101  
415/259-8080

### SAN RAMON

2217 San Ramon Valley Blvd., Ste C  
510/820-6022

### YORBA LINDA

3890 Prospect Ave., Ste. C  
714/579-0808  
Open Sunday by appt.

### DAILY CITY

7317 Mission Street  
415/994-7581

### MILPITAS

976 Hanson Court  
408/946-6991

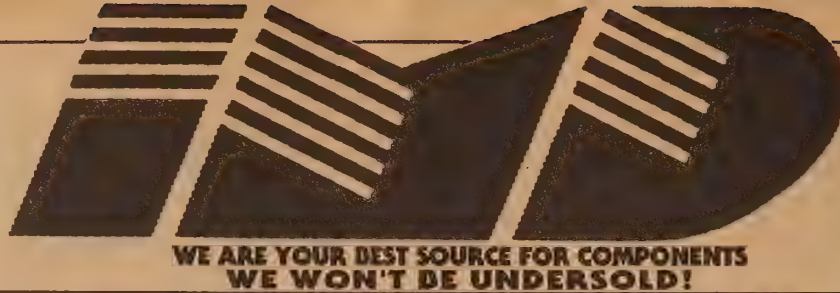
**Domino<sup>®</sup>**  
COMPUTER, INC.

Your Neighborhood Workshop  
Service and Upgrade Center

# Life-Time Labor Warranty

100% Financing Available for both  
home and Corporate Users.





## WE WILL TRADE YOUR OLD MEMORY FOR NEW

### SIMM MODULES

#### IBM COMPATIBLE

|            |       |
|------------|-------|
| 4M X 9-80  | \$129 |
| 4M X 9-70  | 139   |
| 4M X 9-60  | 151   |
| 1M X 9-10  | 28    |
| 1M X 9-80  | 33    |
| 1M X 9-70  | 35    |
| 1M X 9-60  | 37    |
| 1M X 3-80  | 30    |
| 1M X 3-70  | 34    |
| 1M X 3-60  | 36    |
| 256 X 9-10 | 8     |
| 256 X 9-80 | 9     |
| 256 X 9-70 | 11    |
| 256 X 9-60 | 12    |

### APPLE/MAC

|              |         |
|--------------|---------|
| 1M X 8-10    | \$28    |
| 1M X 8-80    | 31      |
| 1M X 8-70    | 33      |
| 4M X 8-80/70 | 119/124 |

### DRAM

|              |        |
|--------------|--------|
| 1M X 1-80    | \$3.70 |
| 1M X 1-70    | 3.80   |
| 1M X 1-60    | 3.90   |
| 1M X 4-80/70 | 17.00  |
| 256K X 1-80  | 1.65   |
| 256K X 1-70  | 1.80   |
| 256K X 1-60  | 1.95   |
| 256K X 4-80  | 3.95   |
| 256K X 4-70  | 4.15   |
| 256K X 4-60  | 4.30   |

### CPU'S

|                    |       |
|--------------------|-------|
| 486DXII-66 INTEL   | \$469 |
| 486DXII-50 INTEL   | 349   |
| 486DX-50 INTEL     | 409   |
| 486DX-33 INTEL     | 279   |
| 486DX-25 INTEL     | 219   |
| 486SX-25 INTEL     | 99    |
| 486SX-33 INTEL     | 179   |
| 386DX-33 INTEL     | 59    |
| 386DX-40 AMD       | 69    |
| 386DX-25 INTEL     | 35    |
| 386DX-25 AMD       | 33    |
| 386SX-25 INTEL/AMD | 30    |
| 386SX-20 INTEL     | 25    |
| 386SX-16 INTEL     | 20    |
| 386DX-20 INTEL     | 25    |

## BUSINESS AND ECONOMY SYSTEM SPECIALS

|                       |        |
|-----------------------|--------|
| 486-50MHz             | \$1799 |
| 486-33 DLC            | 1149   |
| 386SX-16/25           | 989    |
| 386DX-25/33 64K CACHE | 1299   |
| 486SX-20/25           | 1099   |
| 486DX-33              | 1699   |

### ALL SYSTEMS INCLUDE:

Tower Case, 4MB, IDE Controller, 25PG, 1.44FDD, HDD, 1MB SVGA Card, 28 CIR, Monitor, 101KB, Mouse, DOS

### CALL FOR CUSTOM CONFIGURATIONS!

## MOTHERBOARD W/O CPU

|                       |       |
|-----------------------|-------|
| 486DX-50 W/256K CACHE | \$125 |
| 486DX-33 W/64K CACHE  | 117   |
| 386DX-40 W/64K CACHE  | 95    |
| 386DX-33 W/64K CACHE  | 91    |
| 386SX-16 W/CPU        | 89    |
| 386SX-25 W/CPU        | 105   |
| 386SX-33 W/CPU        | 159   |

## HARD DRIVES

|         |             |       |
|---------|-------------|-------|
| CONNER  | 40MB IDE    | \$129 |
|         | 80MB IDE    | 164   |
|         | 120MB IDE   | 199   |
|         | 200MB IDE   | 289   |
|         | 240MB IDE   | 309   |
| MAXTOR  | 520MB IDE   | 759   |
|         | 80MB IDE    | 199   |
|         | 130MB IDE   | 209   |
|         | 360MB IDE   | 399   |
|         | 340MB SCSI  | 545   |
| QUANTUM | 660MB       | CALL  |
|         | 52MB IDE    | 149   |
|         | 120MB IDE   | 185   |
| SEAGATE | 240MB IDE   | 279   |
|         | 40MB IDE    | 129   |
|         | 105MB IDE   | 189   |
| CDC     | 130MB IDE   | 199   |
|         | 200MB IDE   | 325   |
|         | 91.5MB SCSI | 199   |
| FUJITSU | 540MB IDE   | 749   |

**\*CALL FOR BEST PRICES ON SCSI & IDE HARD DRIVES NOT LISTED!\***

**OPEN M-F 9-5:30 SAT 10-2**

## MONITORS

|                    |         |
|--------------------|---------|
| MONOCHROME 12"/14" | \$75/99 |
| MONO VGA 14"       | 119     |
| 14" SVGA 0.28      | 239     |
| NON-INT SVGA 0.28  | 259     |
| SONY 1304          | 749     |

## FLOPPY DRIVES

|                     |      |
|---------------------|------|
| 1.2MB TEAC 5.25"    | \$51 |
| 1.2MB SAMSUNG 5.25" | 49   |
| 1.44MB TEAC 3.5"    | 46   |
| 1.44MB SONY 3.5"    | 49   |

## TAPE BACK-UPS

|                |       |
|----------------|-------|
| 120MB COLORADO | \$149 |
| 250MB COLORADO | 199   |
| 500MB PORTABLE | CALL  |

## MATH CO'S

|                      |      |
|----------------------|------|
| 387DX 16-33 INTEL    | \$72 |
| 387DX INTEL          | 69   |
| 387SX 25,20,16       | CALL |
| 387DX 33,25,20 CYRIX | 69   |
| 4167-33 WEITEC       | 499  |
| 4167-25 WEITEC       | 319  |
| 3167-33 WEITEC       | 199  |
| 3167-25 WEITEC       | 99   |

## LASER PRINTER MEMORY

|                                                                                                                            |      |
|----------------------------------------------------------------------------------------------------------------------------|------|
| HP II IIID, CANON LBP-811 & LBP-811R, OLIVETTI PG 108 & PG 208                                                             |      |
| 1MB BOARD                                                                                                                  | \$79 |
| 2MB BOARD                                                                                                                  | 109  |
| 4MB BOARD                                                                                                                  | 169  |
| HP IIP, III, IIID                                                                                                          |      |
| 1MB BOARD                                                                                                                  | 79   |
| 2MB BOARD                                                                                                                  | 109  |
| 4MB BOARD                                                                                                                  | 169  |
| IBM 4019 & 4019B                                                                                                           |      |
| 1039136 1MB BOARD                                                                                                          | 105  |
| 1039137 2MB BOARD                                                                                                          | 139  |
| 1038675 4MB BOARD                                                                                                          | 299  |
| IBM 2029e                                                                                                                  |      |
| 1MB                                                                                                                        | 75   |
| 2MB                                                                                                                        | 99   |
| 4MB                                                                                                                        | 175  |
| TI MICROLASER & MICROLASER PS                                                                                              |      |
| 1MB                                                                                                                        | 85   |
| PANASONIC KX-P4420, KX-P44501                                                                                              |      |
| 1MB BOARD                                                                                                                  | 129  |
| 2MB BOARD                                                                                                                  | 157  |
| 4MB BOARD                                                                                                                  | 229  |
| EPSON EPL-6000; TOSHIBA PAGELASER 6; PACKARD BELL PP9500; FACIT P6060; MANNESMAN TALLY 905; AT&T 593 LASER; NCR 6435 LASER |      |
| 1MB BOARD                                                                                                                  | 135  |
| 2MB BOARD                                                                                                                  | 160  |
| 4MB BOARD                                                                                                                  | 260  |

**TEL: 408-452-7700**

**FAX 408-452-7771**

**1630 OAKLAND RD. A108  
SAN JOSE, CA 95131**

IMD Offers complete satisfaction with every transaction. Same day shipping. Prices subject to change without notice. All trademarks are the property of their respective owners.



**INTERNATIONAL  
MICRO DEVICES**

**ASK ABOUT OUR  
SYSTEM LEASE PROGRAM**

## DISCOVER THE CUPERTINO COMPUTERS DIFFERENCE!

# LARRY WOOD - OWNER

|                  |       |                                                    |
|------------------|-------|----------------------------------------------------|
| 386DX-40C128     | \$319 | 1 YEAR PARTS, 3 YEAR LABOR                         |
| 486DLC-33C128    | 359   | WARRANTY ON ALL SYSTEMS                            |
| 486DX-33C256     | 599   | MON-FRI 10:00-6:00                                 |
| 486DX-50C256     | 739   | SATURDAY 11:00-4:00                                |
| 486DX2-66C256    | 809   | Sale Prices for CASH CUSTOMERS                     |
| 486DX-33 VESA LB | 609   | NO CREDIT CARDS                                    |
|                  |       | Corporate P/O's Welcome                            |
|                  |       | Prices & availability subject to change w/o notice |

**STANDARD SYSTEM:** Motherboard & CPU, 1 MB RAM, Desktop or Mini-Tower Case, 230 Watt Power Supply, 101 Key Enhanced Keyboard, 2 Hard/2 Floppy Disk 1:1 Controller Card, AMI Bios, 1.2 or 1.44 MB Floppy Drive, 2 Serial/Parallel/Game I/O Ports.

**CUPERTINO COMPUTERS Inc.**

**10675 S. DE ANZA BLVD., CUPERTINO, CA 95014**  
**TEL: (408) 255-5997 FAX: (408) 255-7699**

# MicroTIMES

## EDITOR-IN-CHIEF

Dennis Erokkan

## PUBLISHER

Chuck Stanley

EDITORIAL 510-934-3700

EDITOR Mary Eisenhart

ASSISTANT EDITOR Michael Robin

NEWS EDITOR Paul Hoffman

SENIOR DESIGNERS Rick Colby, Monika Lukenbill

CONTRIBUTING EDITORS Lenny Bailes, John Perry Barlow,

John C. Dvorak, Jonathan E., Bennett Falk,

Mitsu Hadeishi, Ed Kahn, Mitchell Kapor, Matthew Leeds,

Mike Markowitz, Brock Meeks, David Morgenstern, Douglas

J. Nakakihara, Tony Reveaux, Birrell Walsh, Jim Warren,

Wayne A. Yacco

CONTRIBUTING WRITERS Mikael Blaisdell, Jennifer Robin

Cherniss, Anna Couey, Kathleen Creighton, Adam Gaffin,

Rich Grace, Peter John Harrison, Fred Lieberman,

Woody Liswood, Robert Moskowitz, Kevin Savetz,

David A. Simon, CPA, John Wolcott

BBS RESEARCHER David Remus

CONTRIBUTING PHOTOGRAPHERS Jay Blakesberg, Michael Jay,

Susana Millman, Ann Summa, Paul Winternitz

ADVERTISING 510-934-3700

DIVISION BUSINESS MANAGER Amy Barrett

SALES MANAGER Cynthia Lapporte

(Southern California)

AD DIRECTOR Greg Sage

SENIOR ACCOUNT DIRECTOR Barry Green

(Northern California)

NATIONAL ACCOUNT DIRECTOR Jane Shepherd

(Southern California)

ACCOUNT EXECUTIVES Melissa Campbell, Marty Gillow,

Tracy Longo, Ken Marson, Herb Mendelsohn,

Debra Siegel, Chloe Vezo

CLASSIFIED & SUBSCRIPTION MANAGER

Jennifer Kosta (Northern California)

ADVERTISING SERVICES ASSISTANT

Carolyn Guerrero (Northern California)

Warren La Guzza (Southern California)

## PRODUCTION

GROUP PRODUCTION DIRECTOR Richard Lesovoy

GROUP PRODUCTION MANAGER Mary Beth DeSantis

PRODUCTION ASSISTANT Wendy Sloneker

TRAFFIC ASSISTANT Matt Matuska

ART STAFF Renée Alborelli, Jennifer Bagwell, Donna Bogener,

Paul Dorian, Gigi, Robyn Hartt, Michelle Logan,

Cheryl McGrath, Stephen Noetzel

CAMERA OPERATOR John Moorehead

PROOFREADERS John Downen, Beth Bartels Tarder

TYPESETTING The Typesetting Shop, Inc.

## ADMINISTRATION

CONTROLLER Patricia Buck

SENIOR ACCOUNTANT Linda May

ACCOUNTING Joaquin Arellano, Kim Carrington,

Vickie Liu, Brian Murray, Bonnie Peterson

CREDIT MANAGER Doug Morgan

HUMAN RESOURCES DIRECTOR Erica Stein-Oakley

L. A. OFFICE MANAGER Deborah Daiken

ADMINISTRATIVE ASSISTANTS Christine Garcia,

Leta Jesch

L. A. ADMINISTRATIVE ASSISTANT Michelle Rosendin

DISTRIBUTION 510-934-3700

DISTRIBUTION MANAGER John Erokkan

Assistant Manager/LA Art Holland

DISTRIBUTION ASSISTANT Tami Martin

DISTRIBUTION CLERK David Remus

FIELD COORDINATORS Roe Eyth, Frank Grygus

DISTRIBUTION Dennis Anderson, John Clefstad,

Don Karr, Juan Lau, Jac Michanovic, Robbie Myers,

Curtis Ng, Kelly Orr, Joseph Rafalo, Reliable Circulation,

John Dimas Rezendes, SPS, Wilfredo Villarreal

PUBLICATIONS BAM Magazine, DRIVE! Magazine,

SF Downtown

## FOUNDERS

Dennis Erokkan, Don Hamilton, Pat Hamilton

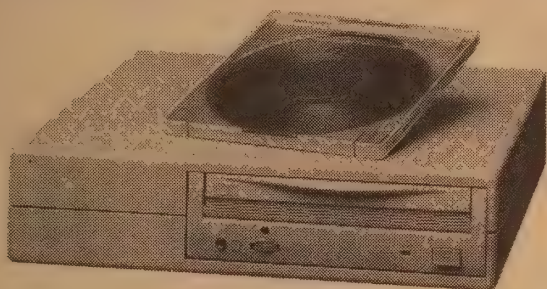
This Vol. 10 No. 9 September 20, 1993, Whole No. 113 MicroTimes, California's Computer Magazine, is published by BAM Publications, Inc., 3470 Buskirk Ave., Pleasant Hill, CA 94523. Phone Advertising Office (510) 934-3700. Los Angeles Office, 6767 Forest Lawn Drive, Suite 110, Los Angeles, CA 90068. Phone (213) 851-8600. San Jose Office, 36 Harold Ave., Suite 2, San Jose, CA 95117. Phone (408) 244-4400. Anaheim Office, 801 East Katella Ave., Suite #210, Anaheim, CA 92805. Phone (714) 939-2809. MicroTimes™ is © 1993 by BAM Publications, Inc. Subscription rates: 13 issues, U.S.: 3rd Class \$32 (Allow 3 to 4 weeks for delivery), 1st Class \$60 (Allow 1 to 2 weeks for delivery). MEXICO & CANADA: Surface Mail \$50 (Allow 4 weeks for delivery). Air Mail \$70 (Allow 1 week for delivery). OVERSEAS: Surface Mail \$50 (Allow 6-10 weeks for delivery), Air Mail \$165 (Allow 1 week for delivery). To receive sample issues, please send \$4 (\$6 for overseas) to cover postage costs. Back issues are \$6 each. All rights reserved. Reproduction in whole or in part without permission of Publisher is strictly prohibited. The staff and management of MicroTimes do not advocate or encourage the use of any product or service advertised herein for illegal purposes.



# M.P. COMPUTER IS YOUR SOURCE FOR MAC SYSTEMS & PERIPHERALS!!

## M.P. COMPUTERS IS YOUR NEW & RECONDITIONED MAC HEADQUARTERS

|                                          |          |
|------------------------------------------|----------|
| Macintosh + 1mb.....                     | \$299.   |
| Macintosh Classic II 4/40.....           | \$499.   |
| Macintosh Ilci - All Configurations..... | \$899.   |
| Macintosh SE/30 4/40.....                | \$899.   |
| Macintosh LC I, II, & III .....          | IN STOCK |
| Macintosh Ilfx 8/80.....                 | \$1699.  |
| Macintosh Quadra 900 4/160 NEW.....      | \$2599.  |
| Macintosh Quadra 800 8/230 NEW.....      | \$3099.  |
| PowerBook 140 4/40.....                  | \$1249.  |
| PowerBook 145 4/80.....                  | \$1299.  |
| PowerBook 170 4/40 with MODEM!.....      | \$1599.  |
| PowerBook 170 2/80.....NEW.....          | \$1849.  |
| PowerBook 165c 4/40.....SPECIAL.....     | \$2099.  |
| PowerBook 180c.....                      | \$CALL   |



**TOSHIBA 3401B 200ms  
External CD Rom \$489.00!**

**DAYSTAR**  
DIGITAL

**SUPERCARGE your Macintosh  
with a DayStar '030 or '040  
accelerator  
card**

|                                |         |
|--------------------------------|---------|
| PowerCache 33Mhz               | \$335   |
| PowerCache 33Mhz w/ Math Co    | \$419.  |
| PowerCache 40Mhz               | \$499.  |
| PowerCache 40Mhz w/ Math Co    | \$589   |
| PowerCache 50Mhz               | \$639   |
| PowerCache 50Mhz w/ Math Co    | \$739.  |
| Turbo '040 33Mhz SUPER FAST    | \$1099. |
| Turbo '040 40Mhz Beyond Q800!! | \$CALL  |

**M.P. Provides Disk Drive & Memory  
Service Upgrades! - Call for Rates**

### MAC MEMORY

|                                |        |
|--------------------------------|--------|
| •Quadra 700, 900, 950          |        |
| 4, 8 & 16 Meg.....             | \$CALL |
| •Centris, Quadra 800, & LC-III |        |
| 4, 8 and 16 Meg.....           | \$CALL |
| 30 Pin (Std.) - for most Mac's |        |
| 1 Meg SIMMS.....               | \$CALL |
| 4 Meg SIMMS.....               | \$CALL |

|                     |  |
|---------------------|--|
| •PowerBooks         |  |
| All Sizes Available |  |
| •Macintosh Duo      |  |
| All Sizes Available |  |

## RASTEROPS® THE ART & SCIENCE OF COLOR™

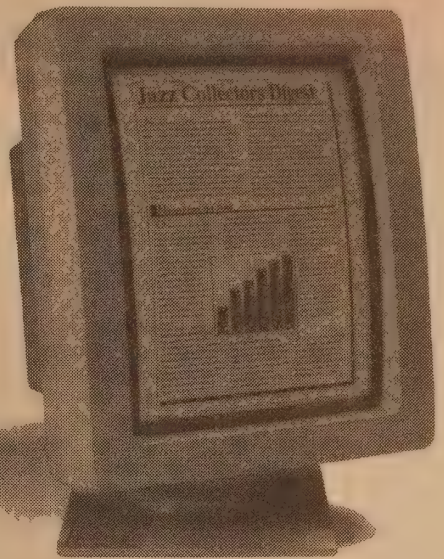
### DISPLAY CARDS

|                                          |         |
|------------------------------------------|---------|
| 8XI -Affordable 8 bit for up to 21"..... | \$449.  |
| 24mx-24bit up to 16" NEW PRICE.....      | \$589.  |
| 24STv-24bit with on screen video.....    | \$749.  |
| PaintBoard Li -24 bit Accel. to 20"..... | \$779.  |
| 8Li-8bit Accelerated to 20".....         | \$329.  |
| MoviePak-30fps Frame Capture.....        | \$799.  |
| Editing Ace Suite-Great Reviews.....     | \$2999. |

### DISPLAYS

|                                        |         |
|----------------------------------------|---------|
| 15" G/Scale Full Page for OnBoard..... | \$359.  |
| 21" GrayScale 2 Page Display.....      | \$999.  |
| 16" Sweet 16 Color Display.....        | \$1029. |
| 20" 20/20 Multimode Display.....       | \$1525. |
| 20" 2075RO Multiscan Trinitron.....    | \$2199. |
| 21" 2168 Color 2 Page Display.....     | \$2149. |

**RasterOps 364 - 24 bit w/ Onscreen  
video, & Frame Capture - SPECIAL 399!!**



### Hard Disk Solutions

|                                     |         |
|-------------------------------------|---------|
| Conner 170mb 12ms Internal.....     | \$229.  |
| Conner 212mb 12ms Internal.....     | \$319.  |
| Quantum 240mb 12ms Internal.....    | \$249.  |
| Maxtor 330mb 15ms Internal NEW..... | \$399.  |
| Maxtor 245mb 15ms Internal.....     | \$289.  |
| Toshiba 213mb PBook Internal.....   | \$535.  |
| Micropolis 560mb Internal.....      | \$869.  |
| Fujitsu 535mb 9ms Internal.....     | \$789.  |
| Toshiba 877Mb 3.5" Internal.....    | \$899.  |
| Toshiba 1.2Gb 3.5" Internal.....    | \$1049. |
| Micropolis 1.2gb 3.5" Internal..... | \$1079. |
| Fujitsu 1.2Gb 3.5" Internal.....    | \$999.  |
| Maxtor 1.2Gb 3.5" Internal.....     | \$1099. |

### Monitors / Displays

|                                       |         |
|---------------------------------------|---------|
| KEC MultiRes VGA for Mac & PC.....    | \$299.  |
| Magnavox 14" RGB w/ Tilt/Swivel.....  | \$399.  |
| NEC 3fgx 15" Multisync Display.....   | \$609.  |
| NEC 3fge 15" MultiSync Display.....   | \$599.  |
| NEC 4fge NEW 15" MultiSync.....       | \$699.  |
| PinPoint 20" MultiMode Trinitron..... | \$1579. |
| Philips NEW 20" M/Mode Trinitron..... | \$2199. |

## UMAX

|                                    |         |
|------------------------------------|---------|
| UC630LE 600dpi w/Photoshop.....    | \$849.  |
| UC840 800dpi w/Photoshop v2.5..... | \$1199. |
| Transparency/Slide Adapter.....    | \$699.  |

- Major credit cards accepted
- Memory guaranteed forever
- Leasing options available
- Tech support for customers
- Int'l clients welcome to buy
- Fortune & Govt. P.O.s - OK

**MACINTOSH & APPLE II SYSTEMS  
BUY • SELL • TRADE • NEW & USED  
Call for pricing & availability.**

## SUPERMAC

|                                            |         |
|--------------------------------------------|---------|
| Spectrum 8•24PDQ 24 Bit .....              | \$599.  |
| Spectrum 24 Ser. IV 24 bt Acc. to 20"..... | \$799.  |
| Spectrum 24 PDQ+ 24 bt Acc. to 21".....    | \$1479. |
| Thunder 24 -Ultra Fast 24 bit.....         | \$2199. |
| Thunder II - The FASTEST 24 Bit .....      | \$3099. |
| Thuner II Light - "No frills" Speed.....   | \$2699. |
| ThunderStorm Pro.....                      | \$2779. |

|                                      |         |
|--------------------------------------|---------|
| 17•T 17" Multi Mode Trinitron.....   | \$1049. |
| 20•T XL 20" Multimode Trinitron..... | \$2549. |

SuperView-Video out for most PowerBooks,  
SE/30's, and Classics SPECIAL.....\$209.

**WE CARRY ALL SUPERMAC ITEMS**

## E-MACHINES

|                                            |        |
|--------------------------------------------|--------|
| PowerLink Presenter for PowerBook.....     | \$449. |
| Futura SX 24 bit Accel. for up to 16"..... | \$479. |
| Futura MX 24 bit Accel. up to 20".....     | \$799. |

|                                      |         |
|--------------------------------------|---------|
| T-16 II 16" MultiMode Trinitron..... | \$1279. |
| T-20 20" MultiMode Trinitron.....    | \$2049. |

|                                    |         |
|------------------------------------|---------|
| T-16/SX Display & Card Bundle..... | \$1749. |
| T-20/MX Display & Card Bundle..... | \$2799. |



|                                          |        |
|------------------------------------------|--------|
| Cards for Mac II family, LC's, and SE/30 |        |
| ProColor Server 8 bit.....               | \$299. |
| ProColor Server 8 • 16 (16/8 bit).....   | \$369. |
| ProColor Server 24 (24/8 bit).....       | \$399. |

|                                           |         |
|-------------------------------------------|---------|
| 1 & 2 Page displays- Mac+ to Quadra 800   |         |
| 15" Full PagePortrait Display w/card..... | \$479.  |
| 15" Full Page Grayscale w/card.....       | \$849.  |
| 19" 2 Page Monochrome w/card.....         | \$899.  |
| 19" 2 page Grayscale w/card.....          | \$1099. |

U.S. 101

Arques

Central Expressway

Lawrence Expy.  
Kifer Rd.



**M.P. - COMPUTER**  
Micro Systems

3004 Lawrence Expressway • Santa Clara, CA • 95051

Providing Quality Macintosh Solutions Since 1986

**Ph:408-481-9600 • Fax:408-481-9604**

**HOURS**  
MON - FRI -  
8:00-5:30  
SATURDAY -  
BY  
APPOINTMENT





# MICROLINK-PC SPECIALISTS

**WARRANTY: 2 YEARS ON MOTHERBOARD**



**VESA Local Bus**

## Ends the Search for The Power Hungry... **32-BIT**

- Intel 486™ Microprocessor w/Zif Socket (Upgradable to Pentium)
- 4MB RAM/256K Cache
- Teac 5.25" & 3.5" Diskette Drives
- 130MB 15ms IDE Hard Drive
- Local Bus 32-Bit IDE Interface
- VESA (32) Local Bus 24-Bit Hi-Color SVGA w/1MB
- 14" Color SVGA 1024 NI Monitor .28
- Middle Tower Case w/250W Power
- 8 16-Bit ISA Slots, 2 with 32-Bit VESA Local Bus
- 101-Key Keyboard
- MS-DOS & Mouse

|                           |               |
|---------------------------|---------------|
| <b>486DX2-66MHz</b> ..... | <b>\$1700</b> |
| <b>486DX-50MHz</b> .....  | <b>\$1640</b> |
| <b>486DX-33MHz</b> .....  | <b>\$1480</b> |
| <b>486SX-33MHz</b> .....  | <b>\$1350</b> |

### UPGRADE OPTIONS

|                                        |               |
|----------------------------------------|---------------|
| <b>VESA S3 Accelerator w/1MB</b> ..... | <b>+\$45</b>  |
| <b>Diamond Viper w/2MB</b> .....       | <b>+\$285</b> |
| <b>ATI Ultra Pro w/2MB</b> .....       | <b>+\$265</b> |
| <b>VESA SCSI Packages</b> .....        | <b>+\$285</b> |
| <b>VESA Network LAN Card</b> .....     | <b>CALL</b>   |



**ISA Systems**

- Intel 486™ Microprocessor
- 4MB RAM/256K Cache
- Teac 5.25" & 3.5" Diskette Drives
- 130MB 15ms IDE Hard Drive
- IDE Interface 16-Bit
- 16-Bit SVGA w/1MB
- 14" Color SVGA Monitor 1024x768 .28
- Mini Case w/250W Power
- 7 16-Bit ISA Slots
- 101-Key Keyboard
- MS-DOS & Mouse

|                           |               |
|---------------------------|---------------|
| <b>486DX2-66MHz</b> ..... | <b>\$1555</b> |
| <b>486DX-50MHz</b> .....  | <b>\$1495</b> |
| <b>486DX-33MHz</b> .....  | <b>\$1335</b> |
| <b>486SX-25MHz</b> .....  | <b>\$1105</b> |
| <b>386DX-40MHz</b> .....  | <b>\$1075</b> |

## NICE VESA EISA 486

- Intel 486 Microprocessor
- American-made Motherboard
- 3 EISA, 5 ISA, 2 VL-Bus Slots
- Built-in Math Co-Processor
- Full Tower w/UL 250W & Speed Display
- AMI BIOS with built-in Setup Utilities
- 256K of 20ns Cache, exp. to 1MB
- 8MB of 70ns RAM, exp. to 128MB
- 340MB 12ms IDE Hard Drive
- TEAC 1.2 and 1.44MB Floppy Drives
- VESA 32 Bit SVGA Graphic Card
- VESA 32 Bit IDE Controller
- MAG 15" Non-Interlaced SVGA Color

- Monitor (Flat Screen, 1280x1024, 0.28, 76Hz Refresh Rate, PC Magazine Editor's Choice)
- 101 Enhanced-Style Keyboard
- 2 Serial /1 Parallel
- Free Microsoft DOS 6.0
- Free 3-Button Hi-Resolution Mouse

**Corporate Choice!**

|                           |               |
|---------------------------|---------------|
| <b>486DX-33MHz</b> .....  | <b>\$2395</b> |
| <b>486DX-50MHz</b> .....  | <b>\$2455</b> |
| <b>486DX2-66MHz</b> ..... | <b>\$2515</b> |

## NICE SUPER EISA 486

- Intel 486 Microprocessor
- American-made 6 Layer Motherboard
- 8 EISA, 1 VL-Bus Slots
- Built-in Math Co-Processor
- Full Tower w/UL 250W & Speed Display
- AMI BIOS with built-in Setup Utilities
- 256K of 20ns Cache, exp. to 1MB
- 8MB of 70ns RAM, exp. to 256MB
- 340MB 12ms IDE Hard Drive
- TEAC 1.2 and 1.44MB Floppy Drives
- VESA 32 Bit Fahrenheit Windows Accelerator
- EISA 32 Bit IDE Controller

- MAG 15" Non-Interlaced SVGA Color Monitor (Flat Screen, 1280x1024, 0.28, 76Hz Refresh Rate, PC Magazine Editor's Choice)
- 101 Enhanced-Style Keyboard
- 2 Serial /1 Parallel
- Free Microsoft DOS 6.0
- Free 3-Button Hi-Resolution Mouse

|                           |               |
|---------------------------|---------------|
| <b>486DX-33MHz</b> .....  | <b>\$2399</b> |
| <b>486DX-50MHz</b> .....  | <b>\$2419</b> |
| <b>486DX2-66MHz</b> ..... | <b>\$2519</b> |

## UPGRADES & OPTIONS

### Deluxe MULTIMEDIA

- Texel DM 3024 Internal CD-ROM
- Media Vision Spectrum 16 Sound Card
- Mayo Clinic Software
- CD Caddy
- CS 150 Labtec 3.6 Watt Speakers
- Anti-Static Wrist Strap

**\$525**

Come see our CD title options at the store!

### STORAGE & MISC.

|                                       |         |
|---------------------------------------|---------|
| On-Board Memory .....                 | \$50/MB |
| 130 to 210MB HDD .....                | \$80    |
| 210 to 250MB HDD .....                | \$20    |
| 250 to 340MB HDD .....                | \$100   |
| 340 to 500MB HDD .....                | \$250   |
| SCSI HDD's .....                      | CALL    |
| CPU Heatsink/Fan .....                | \$15/25 |
| 9600/2400 Fax/Modem .....             | \$50    |
| 14400/14400 Fax/Modem .....           | \$175   |
| 14.4/14.4 Ext. Pocket Fax/Modem ..... | \$210   |
| 96/24 Ext. Pocket Fax/Modem .....     | \$95    |
| Sony 31A Int. CD ROM w/Kit .....      | \$219   |
| Panasonic 522 Int. CD ROM w/Kit ..... | \$220   |
| Toshiba 3401B Int CD ROM w/Kit .....  | \$435   |

### DISPLAY

|                                                |       |
|------------------------------------------------|-------|
| Upgrade from VESA SVGA to Fahrenheit VLB ..... | \$45  |
| Diamond Stealth VLB .....                      | \$65  |
| ATI Pro II/2MB VRAM .....                      | \$265 |
| Diamond Viper VLB .....                        | \$285 |
| 14" 1024I to 14" 1024NI .....                  | \$45  |
| 14" 1024NI to 15" 1280NI .....                 | \$145 |
| 15" 1280NI to 17" 1280NI .....                 | \$395 |
| NEC & Other Brands .....                       | Call  |

### NOTEBOOKS

|                              |        |
|------------------------------|--------|
| 4MB to 8MB RAM .....         | \$220  |
| 4MB to 20MB RAM .....        | \$1000 |
| 120MB to 210MB HDD .....     | \$220  |
| Pocket Fax/Modem 96/24 ..... | \$120  |
| Docking Station .....        | \$295  |
| Extra Battery .....          | \$99   |

**Twinhead Upgrade Options . . . . . Call**

**CALL FOR CUSTOMIZED CONFIGURATION AND LOCAL AREA NETWORKS**

**Check With Your Local Better Business Bureau!**

Since we've been in the business for 8 years, MDS knows how to build your system right the first time. Our satisfied customers include NASA, PG&E, Stanford University, Pacific Bell, National Semiconductor, AMD, Stanford Federal Credit Union, Wells Fargo Bank and many more...



**SANTA CLARA**3472 El Camino Real  
Santa Clara, CA 95051

800-675-5465

408-261-0628

Fax: 408-261-0639

M-F 9:30-6 Sat. 10-5

**SAN FRANCISCO**3210-3212 Geary Blvd  
San Francisco, CA 94118

800-748-6323

415-750-0863

Fax: 415-750-0649

M-F 9-6 Sat. 10-5

**BERKELEY**2324 Shattuck Avenue  
Berkeley, CA 94704

800-938-8283

510-540-8283

Fax: 510-540-8285

M-F 9-6 Sat. 10-5

**SACRAMENTO**6644 Fair Oaks Blvd  
Carmichael, CA 95608

916-488-8523

M-F 9-6 Sat. 10-5

• 1 Year on Other Parts • 3 Years on Labor

**0%****Financing  
No Payments  
Until December****Corporate  
Choice!****Twinhead NoteBooks****Twinhead NOTEBOOKS****Standard Features:**

- Two Serial Ports
- One Parallel/External Floppy Drive Port
- One External SVGA Port
- One External Keyboard Port
- One 100-pin Expansion Port
- Optional Internal 96/24 Fax/Modem
- Optional Built-In Trackball
- Optional carrying case
- 120V/240V AC/DC Adapter/Charger
- **FREE** MS DOS 5.0 and MS Windows w/Manuals
- One Year Warranty Service by Twinhead

**486DX/33T**

- 4MB RAM expandable to 20MB
- 130MB Hard Drive (200MB Available)
- 3.5" 1.44MB Floppy Drive
- 8.5" Active Color Matrix. 256 Colors, 512KB video RAM
- 8.5" x11" x 1.8" 6.3lbs w/Battery

**\$3690**

Passive Matrix Available-Call for Details

**486DX/33M**

- 4MB RAM expandable to 20MB
- 130MB Hard Drive (200MB Available)
- 3.5" 1.44MB Floppy Drive
- 10" Paper White Display. 64 Shades of Gray, 256KB video RAM
- 8.5" x11" x 1.6" 5.8lbs w/Battery

**\$1995****Twinhead Sub-Note****Twinhead Sub-Note****486SLC 33MHz Sub-Note**

- 2MB RAM Exp. to 4 or 8MB
- 8" Side-Lit VGA 64 Shades of gray 256K VRAM
- Built-In Trackball
- 85MB IDE Hard Disk Drive
- External 1.44MB Floppy Drive
- 79-Key Keyboard, Inverted "T" Cursor
- 1 Serial, 1 Parallel ports

- DOS 6.0/ MS Windows 3.1 w/Manual
- Dimensions: 7.1" x 10" x 1.6", weighs 4lbs w/battery

**OPTIONS**

- Internal Fax/Modem
- Carrying Case

**\$1450****NTC Local Bus 486****NTC LOCAL BUS 486****Configuration**

- Local Bus IDE & Local Bus VGA Display
- 4MB RAM expandable to 20MB
- Super Fast 120MB Hard Drive (212MB Optional)
- 3.5" 1.44MB Floppy Drive
- 10" Mono LCD VGA 640x480, 32 Grays
- 10" Passive Matrix Color LCD VGA 640x480, 256 Colors
- 10" Active Matrix Color LCD VGA 640x480, 256 Colors
- Simultaneous CRT & LCD Operation
- Large Built-In 16MM Trackball
- PCMCIA Slots
- Ports for 15,1P, Ext. Keyboard, VGA Monitor, & AT/Bus for Docking Station
- 86-Key Keyboard
- Microsoft DOS 6.0
- Carrying Bag & AC Adapter
- Weight: 6.5lbs (w/Battery)
- 11" W x 8.6" D x 1.77" H
- One Year Parts & Labor Warranty

**FEATURES**

- Intel 486 Upgradable CPU (486SX>486Dx>486Dx2)
- Upgradable LCD Display: (Mono>Passive(STN) > Active(TFT))
- 180 Degree LCD Display Angle Rotation
- PCMCIA Slots
- Flash ROM for BIOS Upgrade thru Software
- Intelligent Power Management (Automatically detects whether CPU is busy or not; When idle, CPU clock is automatically cut to low)
- 2-Hour Quick Charge

**OPTIONS**

- Car Adapter
- Battery Charger
- Docking Station
- PCMCIA Cards (Memory, Fax/Modem, Ethernet LAN Adapter & Mouse)

**32-Bit Local Bus Notebook**

| CPU / Display | Mono          | Color Passive | Color Active  |
|---------------|---------------|---------------|---------------|
| 486DX-33      | <b>\$2070</b> | <b>\$2650</b> | <b>\$3550</b> |
| 486DX2-66     | <b>\$2350</b> | <b>\$2930</b> | <b>\$3830</b> |

**NANAO, NEC, SONY, MAG, ATL, ORCHID, DIAMOND, VIEWSONIC, TEXEL****Need repairs on old computers and laptops? Call us.****We service all name brands and OEMs at hard-to-believe prices.**



# THROW AWAY YOUR DESKTOP

## GET VESA LOCAL BUS NOTEBOOK HERE

VESABook has brought a new dimension to the PC Market. The VESABook has overwhelmed the industry with its integral design, that combines the most powerful Intel 486DX or DX2 processors in a light weight notebook, with a SCSI and VESA compliant docking station. The result is the highest possible level of portable and full-size work station computing capabilities in one. Imagine the capacity of 16MB RAM, 128KB secondary cache, 340MB optional hard drive and PCMCIA type III slot in a notebook computer and an internal stereo speaker, two VESA and two ISA slots, 2 GB SCSI hard drive and CD-ROM in the VESA SCSI-Station. Realize this, and you will know why the large desktop computers will become obsolete.

### VESABook - Unbelievable Single System Solution



- Physical: 11"x8.6x1.9"; 6.2 lbs with Battery (Mono LCD)
- **10" Active Color, Passive Dual Scan Color** or Mono
- Intel 486DX<sup>TM</sup>33Mhz or Intel 486DX2<sup>TM</sup> 66Mhz CPU
- Built-in Math-Coprocessor & 8K Primary Cache
- **128KB** Secondary Cache Memory (Optional)
- 4MB RAM on Board, Expandable to 8, 12, 16 or 20MB
- 130MB Hard Drive (210 & 340MB Optional)
- 32-Bit **VESA Local Bus** Video & IDE Controller
- 3.5" Built-in Floppy Drive
- **PCMCIA** IC Card Slots (One Type III or Two Type II)
- Built-in 16mm Track Ball
- Intelligent Resume/Suspend Power Saver Utilities
- 200 Pin **Local Bus Port** for SCSI VESA-Station
- Rechargeable Ni-Cad Battery & Universal AC
- Support External SVGA Simultaneously
- Serial, Parallel, VGA, PS/2 Mouse & Keyboard Ports
- Battery Life: 2 Hours on TFT Color & 3 Hours on Mono

| VESABook      | Active Color | Dual Scan Color | Mono LCD |
|---------------|--------------|-----------------|----------|
| <b>DX2-66</b> | \$3,950      | \$3,050         | \$2,350  |
| <b>DX-33</b>  | \$3,650      | \$2,750         | \$2,050  |

### SCSI VESA-Station - Designed for Windows NT<sup>TM</sup> & Multimedia

- Physical: 14.5"x14.5"x4.9"; Weight: 10 lbs.
- Universal 150 Watts Power Supply
- Solid Platform for a Monitor up to 20"
- Eight-Layer Mainboard with **32 Bit VESA** Architecture
- Two 32-Bit VESA & Two 16-Bit ISA Slots (Full Length)
- Built-in Future Domain **SCSI BIOS**
- One 5.25" Drive Bay for a SCSI CD ROM
- Two 1" High 3.5" Drive Bays for Two 1" SCSI Drives
- Two Internal **Stereo Speakers**
- Compatible with Most VESA Cards
- 25 Pin **External SCSI** Port for a Tape Backup, Scanner



## MDS

**MDS Computers, Inc.**

3210-3212 Geary Blvd., San Francisco, CA 94118

Tel: 415-750-0650 • Fax: 415-750-0649

(MDS is located at Geary between Spruce and Parker)



## INSI

**Intelligent Notebook Systems, Inc.**

3170 Coronado Drive, Santa Clara, CA 95054

Tel: 408-748-9781 • Fax: 408-748-9782

(Coronado is between Bowers and San Thomas on Scott Blvd.)

\* The trademarks belong to their registered owners. Prices & configurations are subject to change without notice. INSI & MDS reserve rights to charge restocking fees if a system is returned with damages.



## INDUSTRY INSIGHT

### *PowerPC To Ship Early; AT&T Merges Eo and Go*

BY PAUL  
HOFFMAN

#### POWERPCs DUE EARLY FROM APPLE AND IBM

The first computers with PowerPC CPUs will be available at least three months before their previously announced ship dates, much to the surprise and joy of Apple and IBM customers.

Both companies have been successful in the initial design and testing of their PowerPC products and hope to ship in volume within the first three months of 1994. PowerPC is the new RISC CPU designed by the two companies and Motorola; it's gaining a great deal of unexpected support as the two companies publicly demonstrate early versions of the new systems.

The key to the PowerPC's popularity is the large number of operating systems which will be available for it in the near term. Within a year, there will be PowerOpen (the UNIX operating system jointly developed by Apple and IBM), Solaris (the UNIX operating system from Sun Microsystems), IBM's AIX (similar to PowerOpen, but with fewer features), and Apple's System 7 (although most users will be able to run Macintosh software under PowerOpen before System 7 for PowerPC is released). Further in the future, IBM may release OS/2 for PowerPC, and Taligent is creating an advanced object-oriented operating system for PowerPC.

IBM will probably first release a PowerPC system in its RS/6000 line late this year or early next year. That system may run PowerOpen, but may instead run the UNIX

with Workplace operating system, based on IBM's own microkernel. Both operating systems are based on IBM's ever-evolving UNIX, AIX. Even if IBM's first PowerPC systems don't run PowerOpen, clearly many later ones will. Each IBM division that uses the PowerPC CPU will probably base its choice of operating system on the demands of its current customers. It is even possible,

ucts on the experimental hardware have reported that they are amazed at how most of their software runs flawlessly on the new systems with no changes, and how fast the code runs. PowerOpen comes with a full translator for 680x0 instructions, and Apple has developed a full implementation of its System 7.1 operating system. Although few of the system calls have been recompiled for

**The complete set of system enablers allows a system administrator to create a single system folder that will work on all Macintoshes that run system v7.1. This kind of standardization has long been achievable for PCs, but only at the cost of having overly homogenized systems.**

but unlikely, that IBM will support both operating systems on the same hardware. Only systems that run PowerOpen can run Windows or Macintosh programs, and there will be a high demand for those.

Apple's intentions are much clearer. It has been demonstrating various PowerPC configurations running Macintosh software for many months. The first systems will probably be priced close to the middle to top end of the Macintosh line, and may run about twice as fast as those systems. The systems will probably be announced at the beginning of 1994, possibly at Macworld Expo in San Francisco, and shipped within a few months after that. They will run PowerOpen with Macintosh compatibility from the day they are released, and possibly even Windows 3.1 compatibility by the middle of 1994.

Software companies testing their prod-

the PowerPC, companies report that their programs run as fast or faster on the demo PowerPC boxes than they do on some Quadra systems.

Apple has assured corporate buyers that it will not drop the Motorola 680x0 CPUs immediately, and that software will run the same on both systems. In fact, if current Macintosh software runs so well on the PowerPC systems, Apple may have a hard time convincing smaller software companies to recompile their software for the PowerPC so that their software will run even faster. It is likely that Apple will announce new 680x0 and PowerPCs throughout 1994, leaning more strongly towards the PowerPC line by the end of next year.

The PowerPC chip could get a big boost from the recently rumored collaboration between Microsoft and Motorola. Although nothing has been announced, it is likely that



Copyright © 1993 by Paul Hoffman. All rights reserved. Paul Hoffman is an industry analyst who has been covering microcomputer technology for ten years. He can be reached on Internet (phoffman@well) or CompuServe (71545,346). He also writes popular microcomputer books.



the two companies are cooperating on porting Windows NT to the PowerPC CPU. This could be a boon for both companies. If PowerPC is as good as it sounds, having Windows NT available for it could help Microsoft show off NT's abilities better than other RISC processors like the MIPS R4000 and DEC's Alpha. For Motorola, it would be a benefit to have more than one operating

system available, so that systems manufacturers who are afraid of being too close to Apple and IBM (but not afraid of Microsoft) would still be interested in the chip.

## AT&T MERGES EO, GO

AT&T, which has been buying up major parts of many telecommunications-related

companies, has decided to merge two of its early acquisitions into a single company.

Eo, one of the first companies to ship a wireless personal communicator, and Go, maker of a major operating system for such communicators, will merge into a single company. The move was prompted by AT&T, a major shareholder in each company, and was met with some trepidation by competitors of Eo's who rely on the PenPoint system built and sold by Go.

The merger is actually a remerger: Eo spun away from Go a few years ago so that they could make hardware independently from their software parent. Now, both will work together to design both hardware and software, according to AT&T. However, this

**Software companies testing their products on the experimental hardware have reported that they are amazed at how most of their software runs flawlessly on the new systems with no changes, and how fast the code runs.**

leaves Eo's competitors (who have had even less luck in the pen-based communicator market than Eo) having to buy software from the sister company of a major player. The experience will not be unlike that of companies that manufactured workstations powered by the MIPS CPU after Silicon Graphics bought MIPS. The result may be similar: if an equivalently good operating system comes from another manufacturer, it is likely that Eo's competitors will drop PenPoint and use the new competition instead.

AT&T is probably getting worried about not having any say in what it hopes will be a major market, cellular phones used for computer communication. So far, the market for personal communicators has been almost nonexistent, although Apple's recent release of its Newton line looks like it may stimulate the market. However, AT&T will gain almost nothing from Newton unless they have strategic products that they can license. The Eo, while impressive, has proven too expensive for most buyers, and AT&T could easily end up with another overpriced also-ran computer (remember the 3B series of UNIX computers?) By merg-

# LOOK NO FURTHER...

## WE HAVE EVERYTHING YOU'RE LOOKING FOR—CALL AND BE AMAZED!

**AT PORTABLE COMPUTER CENTER WE ARE ABLE TO CUSTOM BUILD ANY DESKTOP CONFIGURATIONS INTO OUR PORTABLES TO SUIT YOUR NEED. PLEASE CALL FOR OPTIONS LIKE INTERNAL CD ROM, TAPE BACKUP SYSTEM, UP TO ONE GIGABYTE IDE, ESDI, OR SCSI HARD DISKS.**

**HI CONTRAST VGA PLASMA PORTABLE**

- 4 MB Memory (Expandable To 32 MB)
- 1.2 MB & 1.44 MB Floppy Disk
- 120 MB Hard Disk\*
- SVGA Card w/1 MB
- 2 Serial/1 Parallel Ports
- 200 Watt PS/110/220 V
- Plasma Display On/Off Switch
- External Display Up To (1280x1024)
- 3 Free Slots/Deluxe Carrying Bag



**486DX2-66 w/256K CACHE.....\$2375**  
**486DX-50 w/256K CACHE.....2275**  
**486DX-33 w/256K CACHE.....2145**  
**486SX-25 w/256K CACHE.....1975**  
**486DX-40 w/128K CACHE.....1895**

**SUPER VGA COLOR CRT PORTABLE**

- 4 MB RAM (Up To 32 MB)
- 210 MB IDE (13ms) HD
- 1.2 MB & 1.44 MB Floppy
- 2 Serial/Parallel Ports
- 3 Drive Bays
- 4 Free Slots
- SVGA Card w/1 MB (32K Colors)
- Carrying Bag



**486DX2-66 MHz w/256K Cache .....\$2475**  
**486DX-50 MHz w/256K Cache .....2375**  
**486DX-33 MHz w/256K Cache .....2275**  
**386DX-40 MHz w/128K Cache .....1975**  
**★ ALL PORTABLES ARE AVAILABLE IN EISA & VESA L. BUS**  
**★ 10" TRINITRON SVGA CRT COLOR 6 SLOTS.....CALL**

**STORAGE SYSTEM LCD PORTABLE LUNCH BOX PC**  
(Looks Like and Has The Same Configuration As The Plasma Above)

**486DX2-66 w/256K CACHE.....\$2045**  
**486DX-50 w/256K CACHE.....1945**  
**486DX-33 w/256K CACHE.....1775**  
**486SX-25 w/256K CACHE.....1575**  
**386DX-40 w/128K CACHE.....1495**

**STORAGE SYSTEM PORTABLE ALL-IN-ONE PC SVGA COLOR 386SX-25 MHZ**  
**\$1295**

- 1 MB RAM Up To 16 MB
- 1.44 MB F.D. (Option Ext. 1.2)
- 120 MB H.D. Up To 340 MB
- 16-Bit SVGA Video/101 Keyboard
- 2 Serial/1 Parallel • Carrying Bag
- Two 16-Bit Expansion Slots



**DESKTOP MONTHLY SPECIAL**

486DX2-66 128K VESA LB.....\$1395  
 486DX-50 128K VESA LB.....1345  
 486DX-33 128K VESA LB.....1195  
 486DX2-66 128K ISA.....1375  
 486DX-50 128K ISA.....1325  
 486DX-33 128K ISA.....1175  
 386DX-40 128K.....945

**ALL SYSTEMS ABOVE INCLUDE:**

- 4 MB RAM
- 212 MB IDE H. Disk (13ms)
- Teac 1.2 MB and 1.44 MB Floppies
- SVGA Monitor (1024x768 .28 dpi)
- SVGA Video Card w/1 MB
- IDE 2HD/2FD Controller
- 2 Serial/Parallel/Game Port
- Enhanced 101 Keyboard
- Mini Tower or Desktop Case
- ★ FREE 3-Button Mouse & Gift

**UPGRADE ADD:**

256K Cache.....\$25  
 250MB Hard Disk.....30  
 345MB Hard Disk.....90  
 Non-Interlaced Monitor.....25

**PLEASE CALL FOR:**  
 Other Configurations  
 System Upgrade/Repair  
 Hardware/Software

Prices subject to change w/o notice • Prices reflect cash discount

**NETWORKING SOLUTION FOR BUSINESS**  
**NOVELL LITE OR WINDOWS WORKGROUP 2 STATIONS STARTER KIT.....\$295**  
**ADDITIONAL STATION.....145**

- Copies Of Above Application
- 16-Bit Ethernet Adapter
- Cables & Terminators
- Basic Hardware & Software Installation
- On-Site Installation Available

**VIDEO CARDS/FAX MODEM**

Spider Black Window VLB w/1 MB.....\$209  
 ATI Graphics Ultra 1 MB w/Mouse.....199  
 Diamond Viper VLB w/2 MB.....375  
 Diamond Stealth VLB w/1 MB.....155  
 Diamond Stealth ISA w/1 MB.....155  
 Genoa Win Acc VLB w/1 MB.....99  
 SVGA Win Acc ISA w/1 MB.....59  
 14.4/14.4 Fax Modem w/WinFax.....149  
 96/2400 Fax Modem w/WinFax.....49

**MONITORS**

SVGA 14" (1024x768 .28).....\$245  
 SVGA 14" (1024x768 .28) NI.....265  
 SVGA 15" Low Radiation NI.....395  
 SVGA 17" Digital 1280 NI.....795  
 NEC 14" (1024x768 .28) NI.....349  
 NEC 3FGE (1024x768) NI.....595

**DEALER PRICING & QUANTITY PRICING AVAILABLE**

**STORAGE SYSTEM ENGINEERING SERVICE**

3350 Scott Blvd., Building 19, Suite 1902 (near Bowers Ave.)  
 Santa Clara, CA 95054

**408-727-6040**  
**FAX: 408-727-6042**

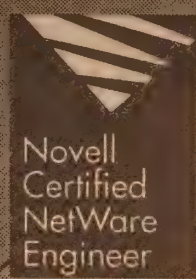
Hours: 10am-6:30pm M-F  
 12 noon-4:00pm Sat

**YOUR SOURCE FOR RELIABLE COMPUTERS & PERIPHERALS SINCE 1983**





**Free Computer Network Configuration Consultation**  
**Call now at (415) 875-6682 or (510) 682-8228 for an**  
**appointment with our network engineers**



**FREE**

## BETA 90's Networks

Trained and tested  
to provide superior  
NetWare Support

**CALL  
NOW!**

Many of our satisfied customers say: "The service, quality, fast response, and extreme care exercised in training, designing, installing, and maintaining our computer network made the network installation project unbelievably successful"

Tell us what you will use the computers for, and we do the rest to provide you with a custom computer network design proposal—Absolutely Free.

**Our experience is your best guarantee and protection!!!**

**BETA NINETIES  
COMPUTER, INC.**

**WE OFFER COMPLETE INSTALLATION,  
UPGRADES, AND A LOT MORE!**

### MOTHERBOARDS

|                                                |      |
|------------------------------------------------|------|
| 386SX-33MHz w/CPU .....                        | \$88 |
| 386DX-40MHz 128K w/CPU .....                   | 140  |
| 486SX-25MHz w/CPU .....                        | 160  |
| 486DX-33MHz 128K w/Intel CPU .....             | 408  |
| 486DX-50MHz 128K w/Intel CPU .....             | 545  |
| 486DX2-66MHz 128K w/Intel CPU .....            | 645  |
| VESA LB 486DX-33MHz<br>256K w/Intel CPU .....  | 428  |
| VESA LB 486DX-50MHz<br>256K w/Intel CPU .....  | 565  |
| VESA LB 486DX2-66MHz<br>256K w/Intel CPU ..... | 665  |

### MODEMS

|                                            |      |
|--------------------------------------------|------|
| Zoltrix 96 Send only/24 Fax/Data Int ..... | \$35 |
| Zoltrix 96/24 Fax/Data Int .....           | 55   |
| Zoltrix 14.4/14.4 Fax/Data Int .....       | 160  |
| Zoltrix 14.4/14.4 Fax/Data Ext .....       | 190  |
| US Robotics 14.4/14.4 Fax/Data Int .....   | 188  |
| US Robotics 14.4/14.4 Fax/Data Ext .....   | 210  |

### TAPE BACKUP

|                               |       |
|-------------------------------|-------|
| Colorado DJ20 250MB .....     | \$210 |
| Colorado DJ10 120MB .....     | 160   |
| Archive XL 250MB w/Tape ..... | 168   |

## THE LEADER IN CUSTOMER SERVICE

WE'LL MAKE SURE YOU LEAVE FEELING SATISFIED BECAUSE YOUR  
SATISFACTION IS OUR BIGGEST GUARANTEE.



### CD ROMS

|                                  |         |
|----------------------------------|---------|
| Toshiba XM-3401B 200ms .....     | \$464   |
| Toshiba XM-3401E 200ms .....     | 564     |
| Texel DM-3024 265ms .....        | 390     |
| Texel DM-5024 265ms .....        | 465     |
| NEC 84-1 280ms .....             | 542     |
| NEC 74-1 280ms .....             | 618     |
| Discovery-16 390ms Int/Ext. .... | 468/534 |
| Discovery-8 390ms Int/Ext. ....  | 410/474 |
| Proaudio Spectrum 16 .....       | 159     |

### Brand NEW Controllers!



### Wonder Systems Controllers

**Ultra-I/O** ..... \$199  
 • Four serial ports (All 16550 FIFO)  
 • Three parallel ports (2 Bi-directional)  
 • Programmable addresses

**FIS** ..... \$85

• Supports SCSI CD ROM and IDE  
 • Co-Exists with other controllers  
 • 7 SCSI Hard Disks or CD ROMS  
 • Two IDE Hard Drives  
 • Four floppy drives  
 • Ideal for gradually upgrading to SCSI or controlling a high performance SCSI CD ROM

**Super IFSP** ..... \$79

• Two IDE Hard Drives  
 • Four floppy drives  
 • Three serial ports (2 16550 FIFO)  
 • Two parallel ports (Bi-Directional)  
 • One game port  
 • Ideal for intensive applications

**IDE 8** ..... \$68

• Co-Exists with other controllers: SCSI, ESDI, RLL, and MFM  
 • Four IDE hard disks  
 • Excellent and easy way for end-users to upgrade to IDE without losing their old hard disk

**IDE 4A** ..... \$29

• Two IDE floppy drives  
 • Four floppy drives  
 • Controls two extra floppies or two tape back ups  
 • Ideal way to add extra floppies or a tape back up device easily and painlessly

### VESA 486DX Local Bus Complete System

|                                                           |        |
|-----------------------------------------------------------|--------|
| 486DX-33MHz .....                                         | \$1468 |
| 486DX-50MHz .....                                         | 1668   |
| 486DX2-66MHz .....                                        | 1708   |
| • Intel CPU w/8K Internal Cache, Math-Coprocessor         |        |
| • AMI BIOS/Clock, Calendar                                |        |
| • 256K of Ultra-Fast Cache                                |        |
| • 4MB Memory                                              |        |
| • 1.2MB & 1.44MB Floppy Drive                             |        |
| • 245MB IDE Hard Drive                                    |        |
| • 1:1 2H/2F IDE Controller                                |        |
| • 2 Serial, 1 Parallel, 1 Game Port                       |        |
| • Genoa 32 Bit Local Bus SVGA Card w/1MB                  |        |
| • 14" Super Non-Interlaced VGA Monitor (1024x768) .28 Dot |        |
| • 101 Enhanced Keyboard                                   |        |
| • Med Tower w/PS                                          |        |

### 486DX ISA Complete System

|                                                       |        |
|-------------------------------------------------------|--------|
| 486DX-33MHz .....                                     | \$1328 |
| 486DX-50MHz .....                                     | 1458   |
| 486DX2-66MHz .....                                    | 1518   |
| • Intel CPU w/8K Internal Cache, Math-Coprocessor     |        |
| • AMI BIOS/Clock, Calendar                            |        |
| • 128K of Ultra-Fast Cache (Expandable to 256K Cache) |        |
| • 4MB Memory                                          |        |
| • 1.2MB & 1.44MB Floppy Drive                         |        |
| • 245MB IDE Hard Drive                                |        |
| • 1:1 2H/2F IDE Controller                            |        |
| • 2 Serial, 1 Parallel, 1 Game Port                   |        |
| • 16 Bit SVGA Card w/1M                               |        |
| • 14" Super VGA Monitor (1024x768) .28 Dot            |        |
| • 101 Enhanced Keyboard                               |        |
| • Mini Tower w/PS                                     |        |

### Intel 486SX-25 Complete System

**\$998**

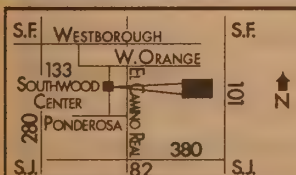
- Intel 486SX-25 MHz CPU
- 8K of Internal Cache
- 4MB Memory
- 1.2MB & 1.44MB Floppy Drive
- 210MB IDE Hard Drive
- 1:1 2H/2F IDE Controller
- Clock/Calendar
- 2 Serial, 1 Parallel, 1 Game Port
- 16 Bit SVGA Card (1024x768) w/512K
- 14" Super VGA Monitor (1024x768) .39 Dot
- 101 Enhanced Keyboard
- Mini Tower w/PS

### Cyrix 486DLC-33MHz Complete System

**\$938**

- Cyrix 486DLC-33MHz CPU
- AMI BIOS
- 64K Ultra Fast External Cache (Expandable to 256 Cache)
- 4MB Memory
- 1.2MB & 1.44MB Floppy Drive
- 130MB IDE Hard Drive
- 1:1 2H/2F IDE Controller
- Clock/Calendar
- 2 Serial, 1 Parallel, 1 Game Port
- 16 Bit SVGA Card (1024x768) w/512K
- 14" Super VGA Monitor (1024x768) .39 Dot
- 101 Enhanced Keyboard
- Mini Tower w/PS

Please call to  
confirm system  
prices due to the  
periodic change in  
memory prices



**Monday-Friday**  
8:30-6:30  
**Saturday 10-5**  
**Sunday 10-5**  
(SSF Store Only)

**BETA NINETIES  
COMPUTER, INC.**  
 133 Southwood Center  
 South San Francisco, CA 94080  
**415/875-6682**  
**Fax 415/875-6683**

**NOW  
OPEN  
7 DAYS  
IN SSF**

**Monday-Friday**  
9:30-6:30  
**Saturday 10-5**



**BETA NINETIES  
COMPUTER, INC.**  
 1655 South Main Street • Milpitas, CA 95085  
**408/956-8800**  
**Fax 408/956-1236**  
 (Main St. & Montague Expressway)



# CALIFORNIA Computer Show & Sale

**LOWEST PRICES  
IN THE USA!**

PC Compatibles • Hardware  
• Software • Accessories

## UPCOMING SHOWS

### COW PALACE

September 25, 1993 •  
Corner of Geneva & Santos, SF

### OAKLAND COLISEUM

October 9, 1993 •  
I-880 & Hegenberger Rd.,  
Oakland

### RANCHO ARROYO SPORTS COMPLEX

October 10, 1993 •  
9880 Jackson Road,  
Sacramento

\$3.00 OFF  
w/ this Ad  
(Sacto Show only)

### COW PALACE

October 16 & 17, 1993 •  
Corner of Geneva & Santos, SF

2-DAY SHOW!

### SANTA CLARA COUNTY FAIRGROUNDS

October 23, 1993 •  
344 Tully Rd., San Jose

### ALAMEDA COUNTY FAIRGROUNDS

October 31, 1993 •  
4501 Pleasanton Ave.,  
Pleasanton

### OAKLAND COLISEUM

November 6 & 7, 1993 •  
I-880 & Hegenberger Rd.,  
Oakland

2-DAY SHOW!

All Shows from  
10a.m. to 4p.m.

Admission: \$6<sup>00</sup>  
Children under 12 FREE

FOR INFO. CALL  
1-800-685-1400

BBS: 415-340-9370

**\$1<sup>00</sup> OFF**

Good For All  
Of The Above Shows.

Limit 1 discount coupon per person.

Regular Admission \$6<sup>00</sup>

Copies accepted.

## NEWS & VIEWS

ing the hardware and software companies, AT&T hopes that both will excel and will be able to work together to create products that will be wanted by end-users as well as other manufacturers.

### IBM WOOS POWER USERS WITH AMBRA

Most "advanced" PCs being manufactured are only advanced in that they have a top-of-the-line CPU (either a fast 486 or a Pentium) and a local-bus slot, possibly with built-in video acceleration. After a few months of product differentiation, most high-end systems are now almost indistinguishable based on features.

IBM's new Ambra Computer Corporation hopes to change that by offering mid-range systems with high-end features built in. For example, the top-performing Ambras that do not have a Pentium processor have IBM's Blue Lightning 486 CPU running at 66 MHz. The Blue Lightning CPU is derived from Intel's 486 line, but with enhancements that are only available on IBM systems (although other manufacturers will probably begin to sell them early next year). Because IBM manufactures the chips itself, it can offer systems that run at 66 MHz and cost about the same as other name brand systems running at 33 MHz. All systems come with MS-DOS 6.0 and Windows 3.1; interestingly, there is no mention of IBM's new PC-DOS 6.1 or OS/2 2.1.

Additional Ambra features include built-in SCSI and 10BaseT Ethernet connections. SCSI drives are often faster than the standard IDE drives and are much more easily expanded. However, because IDE drives have always been the standard, few manufacturers offer SCSI drives with their systems. Ambra was able to leverage the buying and manufacturing power of other IBM divisions to include a SCSI interface in the box. The 10BaseT Ethernet connector saves the \$100-150 that Ethernet cards cost and, more importantly, greatly reduces the hassles involved with installing the cards and setting the jumpers. The Ambras even come with a one year onsite service contract backed by IBM and 24-hour tech support hotlines.

The Ambra systems cost about the same as systems from Compaq and Dell that have fewer features. For about \$2,000, you can get a 66 MHz system that runs much faster than a similarly priced name brand system; for about \$4,300, you get a full Pentium system. They even offer a color

portable system for under \$2,500. If IBM is successful at drawing back its old customers with the Ambra line, its competitors might have to start including more advanced features lower down in their product lines.

### NEW HARDWARE MEANS NEW OPERATING SYSTEM RELEASES: APPLE'S SYSTEM ENABLERS UPDATED

One of the clearest differences between the Macintosh market and the PC market is that Apple can come out with different hardware configurations whenever it feels like it. The new hardware may be a simple reconfiguration of an existing model (such as a faster CPU or a different box), but it may include radically different hardware, such as Apple's new AV series that has a digital signal processor (DSP) built into the system. Instead of having to rewrite the operating system for such major changes, Apple can simply provide a system enabler to the current operating system (v7.1).

In the PC world, life is not so easy. MS-DOS is a lowest-common-denominator type of operating system. Version 6.0 will provide the same features to literally thousands of types of systems. On the other hand, if a manufacturer wants to significantly change the base hardware set, they have to either use a more sophisticated operating system like UNIX or the recently released Windows NT, or they must add device drivers to the MS-DOS startup file. While most device drivers work just fine, they are incredibly confusing to most users and, if the startup files get accidentally deleted or modified, the system may not work. Apple's workaround, which consists of adding a single file per model to the main system directory, is much easier for even the most inexperienced of users.

Apple recently announced a complete set of the system enablers for all models released in the last year. The complete set, which fits on a single floppy, allows a system administrator to create a single system folder that will work on all Macintoshes that run system v7.1. This kind of standardization has long been achievable for PCs, but only at the cost of having overly homogenized systems. Users who needed specialized devices with their own device drivers could not have their systems universally upgraded. Apple's method of updating just the enablers will certainly win the hearts of corporate buyers who have to support both low-end Macs and higher-end workstations. ■



# CommandLine Computers

*The difference is experience.*

**FREE ON-SITE SERVICE IN THE BAY AREA**  
**PURCHASE ORDERS ACCEPTED**  
**PERSONAL FINANCING**

\$0 Down, 90 days same as cash with deferred option  
 You can finance more than the amount of purchase  
 Easy to apply and fast credit decision

**CORPORATE LEASING AVAILABLE**

## HIGH POWER PERSONAL COMPUTING

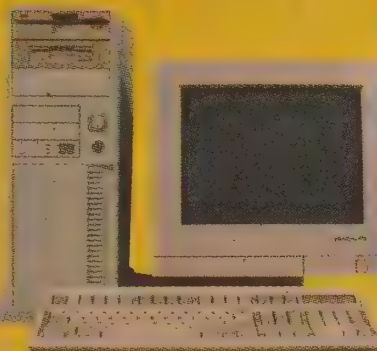
- NICE EISA/VESA/ISA
- 486 DX2-66/DX-33 Mainboard Made in USA
- Intel P-24T Support (ZIF Socket)
- 256K SRAM Cache
- 4MB RAM Expandable to 256MB
- 1.2 MB and 1.44MB Floppy Drive - Teac
- 240MB SCSI Hard Drive QUANTUM
- 32Bit EISA SCSI Controller
- 2 Serial/1 Parallel/1 Game Port
- ORCHID Pro Designer IIS EISA w/1MB
- 15" 1024x768 SVGA Monitor, 0.28 DPI, NI
- Mid Tower Case w/230W Power Supply
- Hi-Res Mouse
- 101 Key Enhanced Keyboard

**ONLY \$2195/\$1995**  
 or \$62/Mo/\$64/Mo

## COMMANDLINE PREMIER

- 486DX2-66/DX-33 VESA Local Bus
- Intel P-24T Support (ZIF Socket)
- 256K Cache Expandable to 1MB
- 4MB RAM Expandable to 128MB
- 1.2 MB and 1.44MB Floppy Drive - Teac
- 245MB Maxtor IDE Hard Drive
- 32 Bit VLB 2FDD/2HDD IDE Controller
- 2 Serial, 1 Parallel, & 1 Game Port
- 32 Bit VLB Window Accelerator w/1MB
- 14" 1024x768 SVGA Monitor 0.28 DPI
- Mini Tower Case w/200W P/S
- 101 Key Enhanced Keyboard
- Hi-Res Mouse

**ONLY \$1599/\$1399**  
 or \$52/Mo/\$45/Mo



**CALL FOR CUSTOMIZED CONFIGURATION...**

## IBM SERVICE + QUALITY IBM 486 SLC2-66/SLC2-50

- VESA Local Bus 3 Year Limited Warranty
- IBM 486 SLC2-66/SLC2-50 CPU Licensed by Intel
- On Board Math CO-Processor
- 16K Internal Cache
- 4MB RAM
- 1.2MB and 1.44MB Floppy Drive - Teac
- 170 MB Conner IDE Hard Drive
- IDE 2HDD/2FDD Controller
- 2 Serial, 1 Parallel, & 1 Game Port
- Orchid VLB 1280x1024 SVGA Card w/1MB
- 14" SVGA Monitor 1024x768 0.28DPI, NI
- Mini Tower Case w/200W PS
- 101 Key Enhanced Keyboard
- Hi-Res Mouse

**ONLY \$1445/\$1345**  
 or \$45/\$42/Mo

## PRACTICAL COMPUTING

- Intel 486 DX2-66/DX-33 Processor
- 128K S RAM Cache
- 4MB RAM up to 32MB on Board
- 1.2MB & 1.44MB Floppy Drive - Teac
- 170MB Conner IDE Hard Drive
- IDE 2HDD/2FDD Controller
- 2 Serial, 1 Parallel, & 1 Game Port
- 16-Bit SVGA Windows Accelerator w/1MB
- 14" SVGA Monitor 1024x768 0.28, NI
- Mini Tower Case w/200W PS
- 101 Key Enhanced Keyboard
- Hi-Res Mouse

**ONLY \$1495/\$1295**  
 or \$48/Mo/\$42/Mo

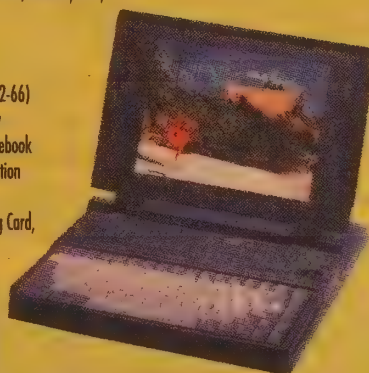
**For a black sleeker looking system just add \$55**

## SAGER NOTEBOOK 700 - BIG POWER IN A SMALL PACKAGE

## SAGER NOTEBOOK 800 - LOCAL BUS

- NP740 (486SX-25)
  - \$1650 (Mono)
  - \$3225 Color(Active)
  - NP743 (486DX-33)
  - \$1850 (Mono)
  - \$3450 Color(Active)
  - NP746 (486DX2-66)
  - \$2150 (Mono)
  - \$3715 Color(Active)
- Configurations:**
- 4MB RAM expandable to 16MB
  - Removeable 120MB Hard Drive (80, 200MB Optional)
  - 3.5" 1.44MB Floppy Drive
  - 10" Mono LCD VGA 640x480 64 Grays
  - 10" Passive Matrix Color LCD VGA 640x480, 16 Colors
  - 10" Active Matrix Color LCD VGA 640x480, 256 Color
  - Simultaneous CRT & LCD Operation
  - Large Built-In 16mm Trackball
  - PCMCIA Type I & II Slot
  - Ports for IS, IP, Ext, Keyboard/Keypad, VGA monitor & AT/Bus for expansion box
  - 83 Key Keyboard
  - Microsoft DOS 6.0
  - Carrying Bag & AC/Adapter
  - Weight 5.5lbs, with Battery
  - 11.4"W x 8.6"D x 1.65"H
  - Sager's Umbrella Protection Policy

- Features:**
- Module Pack Area: Trackball, Fax/Modem, SCSI, PS/2 Mouse-COM 2
  - PCMCIA Slot
  - Intel 486 Upgradeable CPU (486SX>486DX-33>486DX2-66)
  - Easy to Upgradeable Memory (RAM) No need to Open Notebook
  - 180° LCD Display Angle Rotation
  - 2-Hour Quick Charge
  - Expansion Box: 2 16-Bit Long Card, 13.5" HDD Bay
  - External Battery Pack: Doubles Running Hours
  - Screws Into Bottom Back of Notebook Raising & Angling Keyboard for Easy Typing



- NP840 (486SX-25)
- \$1750 (Mono)
- \$3375 Color(Active)
- NP843 (486DX-33)
- \$1950 (Mono)
- \$3575 Color(Active)
- NP846 (486DX2-66)
- \$2250 (Mono)
- \$3850 Color(Active)

- Configurations:**
- Local Bus IDE & Local Bus VGA Display
  - 4MB RAM expandable to 20MB
  - Super Fast 120MB, Hard Drive (80, 200, 340 Optional)
  - 3.5" 1.44MB Floppy Drive
  - 10" Mono LCD VGA 640x480, 64Grays
  - 10" Passive Matrix Color LCD VGA 640x480, 256 Colors
  - Simultaneous CRT & LCD Operation
  - Large Built-In 16mm Trackball
  - 2 PCMCIA Slots
  - Ports for IS, IP, Ext, Keyboard, VGA monitor & AT/Bus for Docking Station
  - 86-Key Keyboard
  - Microsoft DOS 6.0
  - Carrying Bag & AC/Adapter
  - Weight 6.15lbs (with Battery)
  - 11"W x 8.6"D x 1.77"H
  - Sager's Umbrella Protection Policy

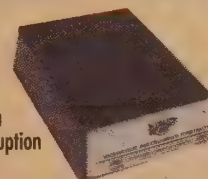
- Features:**
- Intel 486 Upgradeable CPU (486SX>486DX-33>486DX2-66)
  - Upgradeable LCD Display: Mono > Passive (STN) > Active (TFT)
  - 180° LCD Display Angle Rotation
  - 2 PCMCIA Slots
  - Flash ROM for BIOS Upgrade through software
  - Intelligent Power Management (Automatically detects whether CPU is busy or not: When idle, CPU clock is automatically cut to low.)
  - 2-Hour Quick Charge.

- Options:**
- Car Adapter
  - Battery Charger
  - Docking Station
  - PCMCIA Card

**Why buy computers from us? It's simple, Our computers offer the new and unique VIP hardware**

- Increased system reliability
- Less chance of hard disk crashes
- Longer equipment life
- Unlimited surge protection
- Brown-out and overvoltage protection
- Auto safety reboot after power interruption
- EMI/RFI filtered power
- Quick electronic circuit breaker

**Versatile Instrument Protection - Pat. Pending**  
 Add \$49 with system purchase



## CommandLine Computers Inc.

**OPEN: M-F: 9-6, SAT: 10-4**

**921 Kifer RD, Sunnyvale, CA 94086**

**Bus:(408)735-7940**

**Fax:(408)735-7944 (Corner of Commercial and Kifer)**

- 1 Year Parts Warranty, Lifetime Toll Free Technical Support, 30-day Money Back Guarantee Corp. 1000, University and Government PO's Are Welcomed!! No Surcharge on Visa or Mastercard • Prices Subject to Change Without Notice • Not Responsible for Typographical Errors • All Opened Returns Are Subject To 15% Restocking Fee
- 14 Process Days for Purchase Refund

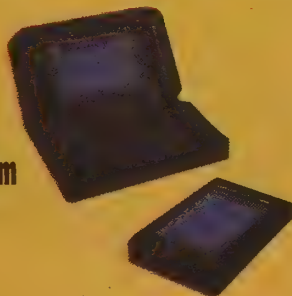


## KEYBOARD & PEN BASED COMPUTER

*A new generation, a new category for portable computers*

### DAUPHIN DTR-1

- 486SLC-25 MHz CPU
- 4MB RAM (6mb MAX)
- 40MB Hard Drive
- 9600/2400 Fax/Modem
- Traveling Case
- 2.5 lb w/Battery
- Window for pen
- DOS 6.0 & WINDOWS
- Backlit 640x480VGA
- More & More "MADE BY IBM"



**\$2950**

## EXTEND YOUR PC POWER MULTIMEDIA PACKAGE

### SONY

- CD-ROM SONY 31A
- Sound Blaster Pro for SONY 31A
- Labtec speaker **\$295**

### TEXEL

- CD-ROM TEXEL DM3024 SCSI 2
- MEDIA VISION SPECTRUM 16 Sound Card
- Labtec speaker
- Cable SCSI **\$559**

### TOSHIBA

- CD-ROM TOSHIBA XM3401 SCSI 2
- MEDIA VISION SPECTRUM 16 Sound Card
- Labtec speaker
- Cable SCSI **\$645**



Don't miss JDR's 14th Anniversary Sale. Everything in our store will be on sale for two days only. Look for our big ad in the San Jose Mercury News on September 24th!

## October Special of the Month

CD-ROM Drive to Sound Card  
Audio Cables - for major mfg's  
drives and sound cards

**\$19<sup>95</sup>**

# JDR Microdevices' 14th Anniversary Sale

Saturday, September 25th from 8:00am to 5:00pm

Sunday, September 26th from 10:00am to 5:00pm

Help us celebrate our 14th Anniversary with our biggest sale of the year. **EVERYTHING WILL BE ON SALE!** Manufacturer's representatives will be here from Microsoft, Intel, Logitech, Computer Associates, BCC-Avanti and National Semiconductor. Don't miss JDR's 14th Anniversary Sale!!!



Serving you since 1979

## i486DX VESA Local-Bus Systems

486DX/33 w/ 4Mb RAM & 261Mb IDE **\$1699<sup>95</sup>**

486DX<sup>2</sup>/66 w/ 4Mb RAM & 261Mb IDE **\$1899<sup>95</sup>**

These JDR Computer Systems include:  
Desktop Case with 200W Power Supply,  
Teac 1.2Mb & 1.44Mb FDDs, VL-Bus  
IDE/FDD Contr. w/1Par-2Ser-1Game,  
VL-Bus Windows Accelerator w/ 1Mb  
RAM, 14" Non-Interlaced SVGA Monitor,  
101-Key Keyboard, Serial Mouse and  
MS-DOS 6.0 AND Windows 3.1!!!

## NEW

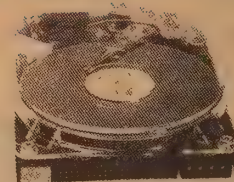
### Chinon Dual Speed Internal CD-ROM Drive



- SCSI-2 with 280ms access time
- Multi-session PhotoCD & XA comp.
- 300Kb/sec xfer rate / 256Kb cache

**\$399<sup>95</sup>**

## Seagate IDE Drives



• One-Year Warranty •

ST-351A 42Mb/28ms **\$109.95**

ST-3096A 89Mb/14ms **\$179.95**

ST-3120A 106Mb/15ms **\$189.95**

ST-3144A 130Mb/16ms **\$199.95**

ST-3243A 214Mb/16ms **\$229.95**

ST-3290A 261Mb/16ms **\$249.95**

ST-3390A 341Mb/12ms **\$349.95**

ST-3550A 452Mb/12ms **\$469.95**

## Bargain Hunters' Specials

Covered By Our Full Warranty!!!

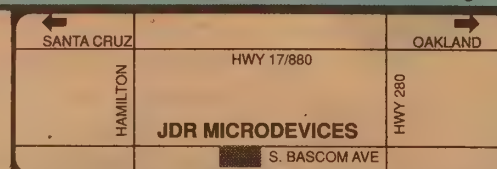
|                                                         |                                                               |                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25MHz 386SX Board • 2 available • <b>\$79.95</b>        | 12" TTL Amber Monochrome • 1 available • <b>\$49.95</b>       | USR 14.4Kbps Fax/Modem • 1 available • <b>\$149.95</b>                                                                                                                                                                                                                                                         |
| 33MHz 386SX Board • 10 available • <b>\$89.95</b>       | 640x480 Monochrome VGA • 1 available • <b>\$99.95</b>         | VL-Bus IDE/FDC/Multi-I/O • 2 available • <b>\$49.95</b>                                                                                                                                                                                                                                                        |
| 33MHz 386SX Board • 1 available • <b>\$99.95</b>        | 1024x768 .39 Intld. Monitor • 4 available • <b>\$199.95</b>   | Caching IDE/Floppy/I/O • 2 available • <b>\$99.95</b>                                                                                                                                                                                                                                                          |
| 33MHz 386DX Board • 5 available • <b>\$149.95</b>       | 1024x768 .28 Non-Intld. Mntr. • 3 available • <b>\$249.95</b> | Orchid ProDesigner IIS • 2 available • <b>\$99.95</b>                                                                                                                                                                                                                                                          |
| 40MHz 386DX Board • 2 available • <b>\$189.95</b>       | NEC 3FGx 15" Flat Screen • 1 available • <b>\$499.95</b>      | AceCad 12"x12" Digitizer • 2 available • <b>\$99.95</b>                                                                                                                                                                                                                                                        |
| 25MHz i486SX Board • 3 available • <b>\$219.95</b>      | NEC 3FGE 15" Flat Screen • 2 available • <b>\$499.95</b>      | Bench-Type Multimeter • 2 available • <b>\$99.95</b>                                                                                                                                                                                                                                                           |
| 33MHz i486SX Board • 1 available • <b>\$249.95</b>      | Moving Monitor Arm • 6 available • <b>\$19.95</b>             | IEEE-488 Interface Card • 1 available • <b>\$199.95</b>                                                                                                                                                                                                                                                        |
| 33MHz i486DX Board • 3 available • <b>\$399.95</b>      | Creative Labs' VideoBlaster • 3 available • <b>\$249.95</b>   | "STB's TV-GRX - TV for your PC" Ltd. Qty's <b>\$99.95</b>                                                                                                                                                                                                                                                      |
| 50MHz i486DX Board • 2 available • <b>\$549.95</b>      | 14.4Kbps Int. Fax/Modem • 1 available • <b>\$119.95</b>       | All Bargain Hunters' Specials are limited to stock on hand and are subject to prior sale. Most Bargain Hunters' Specials are "Catalog Returns". These items are covered by our standard 30-Day Money-Back Guarantee and 1-Year Warranty. Check out our current bargain specials at JDR's Catalog Outlet today. |
| 66MHz i486DX/2 Board • 1 available • <b>\$599.95</b>    | Summit 120Mb Tape Drive • 1 available • <b>\$99.95</b>        |                                                                                                                                                                                                                                                                                                                |
| 50MHz i486DX EISA Board • 2 available • <b>\$699.95</b> | Summit 250Mb Tape Drive • 1 available • <b>\$149.95</b>       |                                                                                                                                                                                                                                                                                                                |



1230 South Bascom Avenue

San Jose, CA 95128 408-280-7144 Fax: 408-947-6234

CATALOG OUTLET



Prices good through 10/16/93 at this location only.  
We are not responsible for typographical errors.

Outlet Hours:

Monday-Friday - 9:00am-7:00pm  
Saturday - 9:00am-5:00pm  
Sunday - 12:00pm-4:00pm





## DOW INDUSTRIALS CONTINUE RECORD PACE

The Dow Jones Industrial Average surged forward yet again last month, to reach an all-time closing high of 3615.48 on August 20—the sixth record reached in that month alone. The S&P 500 Index also stepped into record territory last month when it reached 456.43 on August 19—its highest point since March. For the month, the Dow increased 80.76 points before closing the session at 3605.98, while the S&P 500 increased 10.72 points to close at 455.23.

The strong performance by stocks nationally spilled over into computer stocks, as the Microtimes Stock Index tacked on 192.28 points to close at 4264.70.

Compaq Computer soared during the monthly period, adding \$5.00, or 10.26%, before closing the session at \$53.75. Last month, Compaq signed an agreement with Legato Systems Inc. to integrate and resell Legato NetWorker, a network-wide backup and recovery product.

Following the lead of Compaq, Digital Equipment Corporation added \$1.38 to its price before closing at \$38.88. In a recent news release, Digital announced it will close a manufacturing facility in Kaufbeuren, Germany, which produces magnetic disk drives. The plant will be phased out over the next ten months and will affect about six hundred employees.

On the other hand, Hewlett-Packard trailed behind in the accompanying chart, as that concern fell 88 cents despite reporting third-quarter earnings of \$271 million—an increase of 44% from \$188 million recorded one year earlier. Revenue for the period also increased 23% to \$5 billion from \$4 billion recorded one year ago. Analysts were expecting higher earnings and revenues for the company. Hewlett-Packard closed the session at \$74.38.

Adobe Systems' rating was recently lowered by analyst Fredric Cohen at Ladeburg, Thalman & Co. to "hold" from "buy." The rating reduction was attributed to PostScript, which is used in printers made by Hewlett-Packard, Apple, and other leading computer manufacturers. Adobe's royalty revenues have declined to below 20% of its target levels due to seasonal fluctuations and maturation in the printer business. Adobe finished the month at \$22.13, down \$4.38. ■

| EXCH           | COMPANY                 | TICKER SYMBOL | CLOSING PRICE 07/22/93 | CLOSING PRICE 08/23/93 | NET CHANGE IN MONTH | PERCENT CHANGE IN MONTH | P/E RATIO | ANNUAL DIVIDEND RATE | ANNUAL DIVIDEND YIELD | ANNUAL HIGH | ANNUAL LOW |
|----------------|-------------------------|---------------|------------------------|------------------------|---------------------|-------------------------|-----------|----------------------|-----------------------|-------------|------------|
| SOFTWARE       |                         |               |                        |                        |                     |                         |           |                      |                       |             |            |
| OTC            | Adobe                   | ADBE          | 26.50                  | 22.13                  | -4.38               | -16.51                  | 22        | 0.20                 | 0.90                  | 37.00       | 12.63      |
| OTC            | Aldus                   | ALDC          | 15.25                  | 17.38                  | 2.13                | 13.93                   | 67        | 0.00                 | 0.00                  | 20.75       | 10.25      |
| OTC            | Autodesk                | ACAD          | 44.25                  | 45.50                  | 1.25                | 2.82                    | 21        | 0.48                 | 1.05                  | 56.75       | 38.75      |
| OTC            | Borland (L)             | BORL          | 19.50                  | 20.00                  | 0.50                | 2.56                    | -         | 0.00                 | 0.00                  | 49.00       | 15.25      |
| OTC            | Informix                | IFMX          | 23.00                  | 20.75                  | -2.25               | -9.78                   | 27        | 0.00                 | 0.00                  | 27.25       | 9.06       |
| OTC            | Lotus (H)               | LOTS          | 36.88                  | 35.50                  | -1.38               | -3.73                   | 28        | 0.00                 | 0.00                  | 40.13       | 14.75      |
| OTC            | Microsoft               | MSFT          | 77.63                  | 77.00                  | -0.63               | -0.81                   | 24        | 0.00                 | 0.00                  | 98.00       | 68.50      |
| OTC            | Novell (L)              | NOVL          | 23.75                  | 20.13                  | -3.63               | -15.28                  | 22        | 0.00                 | 0.00                  | 35.25       | 17.63      |
| OTC            | Oracle (H)              | ORCL          | 49.38                  | 54.75                  | 5.38                | 10.89                   | 56        | 0.00                 | 0.00                  | 55.00       | 15.75      |
| OTC            | Software Publishing (L) | SPCO          | 6.63                   | 7.00                   | 0.38                | 5.66                    | -         | 0.00                 | 0.00                  | 14.50       | 5.50       |
| OTC            | Symantec                | SYMC          | 11.25                  | 14.75                  | 3.50                | 31.11                   | -         | 0.00                 | 0.00                  | 18.63       | 5.88       |
| HARDWARE       |                         |               |                        |                        |                     |                         |           |                      |                       |             |            |
| OTC            | Apple (L)               | AAPL          | 26.50                  | 28.38                  | 1.88                | 7.08                    | 20        | 0.48                 | 1.69                  | 65.25       | 25.25      |
| OTC            | AST Research            | ASTA          | 15.75                  | 15.13                  | -0.63               | -3.97                   | -         | 0.00                 | 0.00                  | 24.25       | 11.25      |
| NYS            | Commodore               | CBU           | 3.50                   | 3.50                   | 0.00                | 0.00                    | -         | 0.00                 | 0.00                  | 9.25        | 2.50       |
| NYS            | Compaq                  | CPQ           | 48.75                  | 53.75                  | 5.00                | 10.26                   | 13        | 0.00                 | 0.00                  | 61.75       | 28.38      |
| NYS            | Digital Equipment       | DEC           | 37.50                  | 38.88                  | 1.38                | 3.67                    | -         | 0.00                 | 0.00                  | 49.25       | 30.38      |
| OTC            | Dell                    | DELL          | 17.13                  | 18.75                  | 1.63                | 9.49                    | 17        | 0.00                 | 0.00                  | 49.88       | 13.50      |
| NYS            | Hewlett-Packard         | HWP           | 75.25                  | 74.38                  | -0.88               | -1.18                   | 20        | 1.00                 | 1.34                  | 89.25       | 50.25      |
| NYS            | IBM (L)                 | IBM           | 43.38                  | 44.38                  | 1.00                | 2.31                    | -         | 1.00                 | 2.25                  | 88.75       | 40.63      |
| NYS            | Silicon Graphics (H)    | SGI           | 36.88                  | 39.50                  | 2.63                | 7.12                    | 33        | 0.00                 | 0.00                  | 39.75       | 17.63      |
| OTC            | Sun Microsystems        | SUNW          | 27.25                  | 26.75                  | -0.50               | -1.83                   | 18        | 0.00                 | 0.00                  | 41.00       | 24.00      |
| NYS            | Xerox (L)               | XRX           | 72.38                  | 72.88                  | 0.50                | 0.69                    | -         | 3.00                 | 4.12                  | 88.88       | 70.25      |
| NYS            | Tandy                   | TAN           | 28.75                  | 29.25                  | 0.50                | 1.74                    | 16        | 0.60                 | 2.05                  | 32.38       | 22.25      |
| CPU'S          |                         |               |                        |                        |                     |                         |           |                      |                       |             |            |
| NYS            | Advanced Micro Devices  | AMD           | 24.38                  | 31.63                  | 7.25                | 29.74                   | 13        | 0.00                 | 0.00                  | 32.88       | 8.38       |
| OTC            | Intel (H)               | INTC          | 50.00                  | 64.25                  | 14.25               | 28.50                   | 16        | 0.20                 | 0.31                  | 67.25       | 27.13      |
| NYS            | LSI Logic (H)           | LSI           | 15.75                  | 18.13                  | 2.38                | 15.08                   | -         | 0.00                 | 0.00                  | 19.25       | 4.88       |
| NYS            | Motorola (H)            | MOT           | 88.88                  | 98.13                  | 9.25                | 10.65                   | 35        | 0.44                 | 0.46                  | 99.13       | 41.38      |
| COMMUNICATIONS |                         |               |                        |                        |                     |                         |           |                      |                       |             |            |
| NYS            | AT&T                    | T             | 63.88                  | 58.00                  | -5.88               | -9.20                   | 19        | 1.32                 | 2.28                  | 65.00       | 40.63      |
| NYS            | BellSouth Corp. (H)     | BLS           | 55.88                  | 54.13                  | -1.75               | -3.13                   | 17        | 2.76                 | 5.10                  | 58.88       | 46.75      |
| OTC            | MCI (H)                 | MCIC          | 28.75                  | 27.38                  | -1.38               | -4.78                   | 22        | 0.04                 | 0.15                  | 29.88       | 16.06      |
| NYS            | Northern Telecom (L)    | NT            | 21.50                  | 26.25                  | 4.75                | 22.09                   | -         | 0.36                 | 1.37                  | 46.00       | 21.38      |
| NYS            | Pacific Telesis (H)     | PAC           | 49.00                  | 51.88                  | 2.88                | 5.87                    | 24        | 2.16                 | 4.16                  | 53.38       | 39.50      |

Note: Adobe Systems completed a 2-for-1 stock split on 8/10/93

KEY: NYS = NEW YORK ASE = AMERICAN OTC = OVER THE COUNTER  
(H) = NEW HIGH REACHED IN PERIOD (L) = NEW LOW REACHED IN PERIOD

### MARKET DIARY:

|                |    |
|----------------|----|
| ADVANCES.....  | 20 |
| DECLINES.....  | 11 |
| UNCHANGED..... | 1  |
| NEW HIGHS..... | 9  |
| NEW LOWS.....  | 7  |

### MOST ACTIVE ISSUES:

|                                |               |          |
|--------------------------------|---------------|----------|
| LARGEST DOLLAR GAINER.....     | Intel.....    | \$ 14.25 |
| LARGEST DOLLAR LOSER.....      | AT&T.....     | \$ -5.88 |
| LARGEST PERCENTAGE GAINER..... | Symantec..... | 31.11 %  |
| LARGEST PERCENTAGE LOSER.....  | Adobe.....    | -16.51 % |

|                                  | CLOSE 07/22/93 | CLOSE 08/23/93 | NET CHANGE IN MONTH | PERCENT CHANGE IN MONTH |
|----------------------------------|----------------|----------------|---------------------|-------------------------|
| MICROTIMES STOCK INDEX           | 4072.42        | 4264.70        | 192.28              | 4.72                    |
| DOW JONES INDUSTRIAL AVERAGE     | 3525.22        | 3605.98        | 80.76               | 2.29                    |
| STANDARD & POOR'S 500 STOCK INDE | 444.51         | 455.23         | 10.72               | 2.41                    |
| N.Y.S.E. COMPOSITE               | 246.26         | 252.91         | 6.65                | 2.70                    |
| NASDAQ COMPOSITE                 | 695.52         | 730.88         | 35.34               | 5.08                    |

### CLOSING QUOTES FOR GRAPH:

| DATE     | MICRO TIMES | DOW JONES |
|----------|-------------|-----------|
| 02/05/93 | 4083.40     | 3442.14   |
| 03/04/93 | 4127.80     | 3398.91   |
| 04/01/93 | 4196.89     | 3439.44   |
| 04/29/93 | 4074.63     | 3425.12   |
| 05/27/93 | 4554.50     | 3554.83   |
| 06/24/93 | 4266.52     | 3490.61   |
| 07/22/93 | 4072.42     | 3525.22   |
| 08/23/93 | 4264.70     | 3605.98   |

Copyright Nordby International, Inc. Louisville, CO

This information is based on sources believed to be reliable, and while extensive efforts are made to assure its accuracy, no guarantees can be made. Nordby International and Microtimes assume no liability for any inaccuracies. For phone numbers, addresses or any additional financial information on any of the above companies call Nordby International at (303) 666-5903.



# Software Patents SUCK!

BY JIM WARREN

**T**hese columns concern building futures—including discussion of construction problems. This one concerns seriously dangerous court interpretations of law that need correction.

## INTENDED FOR "PROGRESS"; NOT FOR CORPORATE MONOPOLIES

The Constitutional basis for patents says: "The Congress shall have the power ... to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries; ..."

Note the purpose: "To promote the progress of science and the useful arts."

Software patents do not fulfill that purpose.

Apple's Macintosh was wildly successful long before their unsuccessful—and wastefully expensive—INFRINGEMENT litigation against Microsoft (which made Windows look like the Xerox PARC Alto that the Mac also looked like).

Further, Lotus's 1-2-3 was wildly successful long before their look-'n'-feel litigation lunacy. And some industry observers are

*which also lost against Lotus in the Massachusetts courts.—eds.]* In the process, the judge generated unknown, nonstatutory threats against everyone who implements programs that display data in two-dimensional arrays or use keystrokes to issue commands.

## SOFTWARE PATENTS ENDANGER PROGRESS

Software has progressed *best* in the *absence* of patent protection. *All* programs are built using previous programmers' designs.

An increasing number of astute software designers are fearfully trying to avoid any appearance of infringing on some twit's obscure software patent—particularly if the twit is a 500-pound gorilla.

If Xerox had bothered to patent and defend the Alto user interface, we probably *still* wouldn't see the great progress resulting from Apple's Mac.

An increasing number of astute software designers are fearfully trying to avoid any appearance of infringing on some twit's obscure software patent—particularly if the twit is a 500-pound gorilla.

E.g., if you are a graphics programmer, you better make sure your programs don't infringe on Tektronix's years of software

patents—for which they recently began demanding royalties.

And if you want to use the powerful potential of fuzzy logic, plan on paying royalties to the several Japanese companies that are investing *extensively* in fuzzy-logic research and patenting every wee tiny discovery—that is, *if* they will permit you to use their patented logic, at all.

## SMALL IS SCREWED

Patent litigation is wildly consumptive of financial and management resources, and of technical talent as researchers and witnesses. Small companies are little able to initiate patent protection, and *much* less able to defend themselves against infringement claims.

Notice that Lotus didn't first sue Borland in their look-'n'-feel idiocy; Borland had significant financial and legal resources. Instead, Lotus sued itty bitty Paperback Software.

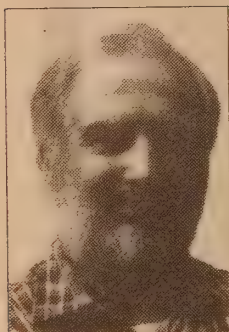
Well-funded thugs are well advised to attack the smallest opponents, least able to defend themselves.

Gives the best chance of favorable court precedents at least cost.

*That does not "promote progress" for the nation's well-being.*

## HAVE THEY PATENTED ";" YET?

Even the most careful of designers can't discover if they infringe patents—for *US patent filings remain secret until they are finally granted*, unlike some other nations that disclose upon filing.



## REALIZABLE FANTASIES

*highly* suspicious of possible provincial bias by the Massachusetts judge who benevolently benefited Massachusetts' massive Lotus at the expense of California's tiny Paperback Software (now defunct). [And, at *presstime*, of California-based Borland,

Copyright © 1993 by Jim Warren, 345 Swett Rd., Woodside CA 94062; emailjwarren@well.sf.ca.us. Permission herewith granted to copy-in-full for any nonprofit use.



# COMPAQ

# COMPUTER WERX ONE STEP AHEAD



## PORTABLES

## DESKTOPS



**CALL FOR  
LATEST  
PRICING  
AND  
AVAILABILITY**

- CONTURA 386SL/25, 120/4 ..... \$1611
- CONTURA 386SL/25, 84/4 ..... 1466
- CONTURA 386SL/25C, 120/4 ..... 2148
- CONTURA 386SL/25C, 84/4 ..... 2003
- LTE LITE 386SL/25C, 120/4 ..... 3234
- LTE LITE 486SL/25C, 120/4 ..... 3878
- PORTABLE 486C/66, 210/4 COLOR ..... 6625
- PORTABLE 486/66, 525/4 COLOR ..... CALL

- DP486/33I, 240/8 ..... \$2062
- DP486/33M, 220/8 ..... 2490
- DP486/33M, 340/8 ..... 2679
- DP486/50M, 240/8 ..... 2739
- DP486/66I, 240/4 ..... 2348
- DP486/66I, 340/4 ..... 2570
- DP486/66M, 240/8 ..... 2966

## QUALITY SERVICE

- We specialize in most of the leading brands of computer and printer repair. Apple, AST, Compaq, Apple monitors and all other clones.
- FREE Estimates on any PC, Monitor or Printer Repairs.
- We do Upgrades in PC's and Mac, Printers.
- FREE Consultation On Novell Netware Installation and Config.

## HARD DRIVES



## MONITORS



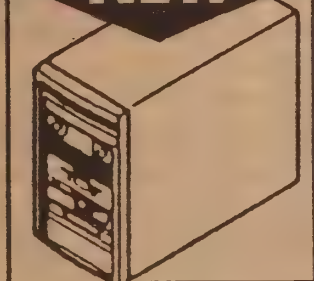
**AST**  
RESEARCH INC.

AST, AST logo registered,  
PowerExec, EasyPort and  
SmartPoint registered  
AST Research, Inc.

**CALL  
FOR PRICING**

AST, AST logo and Premium  
registered and Cupid-32,  
Cupid-32 trademarks  
AST Research, Inc.

**NEW**



## AST BRAVO MT

- \* Mini Tower
- \* 32-Bit Accelerated Local Bus
- \* Upgradable 2 MB, Supports 1024x768 Resolution Non-Interlace at 72Hz
- \* EPA Energy Star Certified
- \* Optional 64K & 256K Cache Memory
- \* Four 5.25" External & Two 3.5" Internal Drive Bays
- \* Six 16-Bit ISA Slots
- \* Dos 6, Windows 3.1 Pre-installed on Hard Drive Models
- \* 1 Year On-Site, 2 Years Depot Warranty on All Hard Drive Models
- \* 4/66d, 4/33 with Model 3, 173W & 343W

**NEW**



## AST BRAVO LC

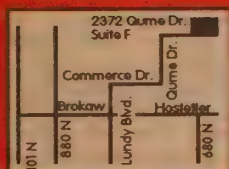
- \* Mid-Size
- \* 32-Bit Accelerated Local Bus
- \* Upgradable 2 MB, Supports 1024x768 Resolution Non-Interlace at 72Hz
- \* Integrated 8K Cache, Upgradable to 64K & 256K
- \* Small Enclosure
- \* Four 16-Bit ISA Slots
- \* Dos 6, Windows 3.1 Pre-installed on Hard Drive Models
- \* 1 Year On-Site, 2 Years Depot Warranty on All Hard Drive Models
- \* 4/66d, 4/50d, 4/33, 4/33S With Model 3, 123W & 213W

**NEW**



## AST BRAVO LP

- \* Low Profile
- \* Local Bus, Video Resolution to 1280x1024, 16.8 Million Colors
- \* Optional 64K & 256K Cache Modules
- \* Supports P24T & DX2 Upgrades
- \* Supports Ether Audio, Token Ring, & Audio Capabilities w/o Using A Slot
- \* Small Enclosure
- \* Dos 6, Windows 3.1 Pre-installed on Hard Drive Models
- \* 1 Year On-Site, 2 Years Depot Warranty on All Hard Drive Models
- \* 4/66d, 4/50d, 4/33, 4/33S With Model 3, 173W & 243W



**2372 QUME DRIVE, SUITE F  
SAN JOSE, CA 95131  
TEL: (408) 954-0490 Fax: (408) 954-0496**

**CORPORATE PQ'S WELCOME**

C-WERX





# WE WILL MATCH OR BEAT ADVERTISED PRICE!

## CASE & POWER SUPPLY

|                                    |        |
|------------------------------------|--------|
| MINI TOWER (200W) CASE w/PS .....  | \$55   |
| MED TOWER/6 SLOT/LED w/PS .....    | 75     |
| FULL TOWER CASE/235W .....         | 108    |
| AT BABY CASE w/PS .....            | 55/65  |
| XT 150W/200W PS .....              | 31/36  |
| AT 200W/230W PS .....              | 40/45  |
| MaxiSwitch KB 101 .....            | 35     |
| Adaptec 1542/1522 SCSI H/F/C ..... | 95/185 |
| Microsoft Serial Mouse .....       | 49     |
| Pen Mouse .....                    | 29     |

## FLOPPY & HARD DRIVES

|                                        |                   |
|----------------------------------------|-------------------|
| Teac 1.2/1.44 FD .....                 | \$50/43           |
| Maxtor 120 MB IDE .....                | 185               |
| Conner 200 MB SCSI .....               | 295               |
| Quantum 170 MB IDE .....               | 209               |
| Maxtor 130 MB, 16ms .....              | 185               |
| Maxtor 7213, 200 MB SCSI .....         | 285               |
| Toshiba 3401B SCSI, 200ms CD-ROM ..... | 395               |
| CD-ROM Creative Labs 380ms .....       | 219               |
| Sound Blaster Pro w/Midi Pkg .....     | 105               |
| Sound Blaster .....                    | 74                |
| Video Blaster .....                    | 302               |
| Sound Blaster Pro 16 Bit .....         | 159               |
| All CD Titles .....                    | SALE! SALE! SALE! |

## PRICE WARS!

## CD-ROM SALE

CD-ROM DRIVE  
Sound Blaster Pro  
& CD programs (5-Titles)  
FREE INSTALLATION!!  
**FROM \$395**

## MOTHERBOARDS

|                                             |          |
|---------------------------------------------|----------|
| 386SX-33/25 w/CPU .....                     | \$107/99 |
| Orchid 486DX2-66, VLB, 256K w/o CPU .....   | 235      |
| Nice USA 486DX2-66, VLB, 256K w/o CPU ..... | 215      |
| 486DX-50, 128K/256K Cache w/o CPU .....     | 128/145  |
| 386DX-40, 128K Cache w/CPU .....            | 148      |
| 486DX-33/50, 256K, VESA Local Bus .....     | 155/165  |

CALL FOR CURRENT CPU PRICES

## MEMORY UPGRADES

|                                           |            |
|-------------------------------------------|------------|
| 1MBx9-80/70 SIMM .....                    | \$52       |
| 4MBx9-80 SIMM .....                       | 179        |
| CPU & DRAM .....                          | LOWEST     |
| HP LASERJET II, IIP, IID, MEMORY UPGRADES |            |
| 1/2/4 MB KITS .....                       | 80/119/199 |

## MONITORS & VGA CARDS

|                                     |        |
|-------------------------------------|--------|
| VESA Local Bus VGA 1 MB .....       | \$105  |
| Orchid F1280, 1MB .....             | 155    |
| Orchid F1280, VLB .....             | 175    |
| MGC 14" Non-Interlace VESA          |        |
| 72Hz 1024x768 0.28mm SVGA .....     | 299    |
| ViewSonic 6E/5E SVGA .....          | LOWEST |
| SVGA 1024x768 MGC .28mm .....       | 265    |
| SVGA 1024x768 MGC .39mm .....       | 215    |
| VGA 640x480 IBM PSI .....           | 199    |
| 15" SVGA 1280x1024 .28mm VESA ..... | 395    |
| Tape Back-Up 120 MB .....           | 138    |
| Zoltrix 96/24 Fax Modem .....       | 68     |
| Zoltrix 14.4 Fax Modem .....        | 165    |
| 2400 Baud Int/Ext Modem Hayes ..... | 42     |

## BOZZEMAN

MARKETING GROUP, INC.  
16 CORNING AVE. SUITE 120, MILPITAS, CA 95035  
(Inside United Center on S. Main St. & Corning)

Mon-Sat 10AM-6PM

TEL: (408) 263-3158

Fax: (408) 263-6763

# NEWS & VIEWS

You can have a hot idea; perform diligent, costly, comprehensive patent searches; ascertain that you infringe no patents; pour body, soul and life savings into your program—and then get sucker-punched by a patent that was filed before your patent search, but not granted until after your development investment.

## PATENTS PROTECT THE POWERFUL

There is the naive delusion that software patents protect the small innovator from the huge corporation. The instances are the exceptions.

Remember Philo T. Farnsworth? The guy who invented television (at age 28!). He patented it and fought and sued corporate intruders for years, and never got a penny from his patents.

Note: IBM holds more software patents than any other US company. For the most part—so far—they just use 'em to badger other patent-holders into royalty-free cross-licenses—hardly helpful to the one-shot innovator.

Corporations are wasting resources building costly arsenals of software patents simply as a defense against other corporations doing the same. When needed, they haul out their trading cards and swap licenses. Hardly helpful to the patent-poor grunt who merely spends his or her time producing great programs.

Big corporations have much more capability, staff, loot, lawyers—and incentive—to patent every comma and semicolon in their programs than do small innovators, and more capability to pursue endless litigation against small opponents.

## SUPPORT PROGRESS; NOT MONOPOLY OF LOGIC

To promote progress, it's time for Congress to declare that reason cannot be patented—that national progress is better served by open sharing of problem-solving techniques, not by their monopoly. They should declare that software is like services; not gadgets. (If you invent a great new service, you can't patent it.)

It is time to clearly protect rational beings' ability to use—and share—logical sequences of instructions to solve problems (a service). We *all* build intellectual improvements on ideas of others, in endless permutations and modifications.

Problem-solving services implemented in software should be protected by copy-

right—and only by copyright, prohibiting direct duplication. However, innovative services implemented as sequences of logical instructions *must not be monopolized*.

Producers who want patent protection can damn well build hardware; patent it—and try to monopolize it. In the meantime, let innovative services for the *rest* of the nation progress—as the Constitution specified.

Had Apple offered the *stellar* Mac operating system as software for numerous platforms—instead of trying to monopolize it in their overpriced boat-anchors—the nation would have more coherent user interfaces ("progress") and Bellevue Billy would probably still be building BASIC interpreters and 2nd-best programs.

## DISCLOSURE & DISCLAIMER

As many know, I'm a member of Autodesk, Inc.'s Board of Directors. Autodesk is the nation's sixth-largest software company, first in the CAD market, and has over \$400 million in net revenues. It's aggressively patenting its *numerous* software innovations. And, as a shareholders' representative—as much as I *despise and detest* software patents—I support Autodesk's obscene waste of time, money and talent on software patents—for self-defense in the absence of responsible Congressional action to *support* progress.

However, my caustic comments here, are entirely my own and do not necessarily reflect views of the Autodesk Board nor management.

For more, contact Richard Stallman, League for Programming Freedom, Box 9171, Cambridge MA 02139; 617-253-8830; rms@ai.mit.edu.

## SHARE WHERE? SHARE HERE!

Send in your practical fantasies that long to be free. We'll share 'em here, for benefit everywhere—standing on each others' shoulders, rather than each others' toes. Ideas are attributed to their senders, unless otherwise requested. ■

Warren founded InfoWorld, Wireless Digital, Initiative, Inc. and one of the nation's largest public microcomputer conventions. He was founding host of PBS' Computer Chronicles, founding editor of Dr. Dobbs' Journal, and has chaired various trade and professionals' organizations. He holds graduate degrees in computing (Stanford), medical information science (UC Medical Center), and mathematics & statistics. He has been a computer professional since 1968, and was a mathematics teacher and professor for ten years before that.

He organized and chaired the landmark First Conference on Computers, Freedom & Privacy (1991) and was one of the first to receive the Electronic Frontier Foundation Pioneer Award (1992). He is a member of the Board of Directors of Autodesk, Inc., and writes and speaks widely on issues of telecommunities and government & technology.



# Our Customers Come Back



MICRONICS



## Tech Trend Delivers:

1. LIFETIME LABOR WARRANTY, 1 YEAR PARTS
2. LIFETIME TECHNICAL SUPPORT
3. WE USE ONLY BRAND NAME MOTHERBOARD & COMPONENTS
4. ON-SITE SERVICE AVAILABLE
5. KNOWLEDGEABLE & HELPFUL STAFF
6. NO SURCHARGE FOR CREDIT CARDS

### TRUE VESA LOCAL BUS SYSTEM



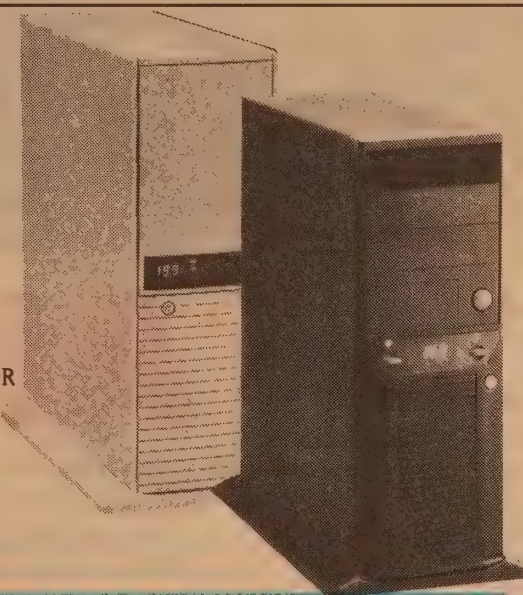
- 486 MOTHERBOARD & INTEL CPU WITH 256K CACHE P24
- 4MB RAM EXPANDABLE TO 32MB
- TEAC 1.2 & 1.44MB FLOPPY DRIVES
- 240MB QUANTUM
- SPIDER VLB SVGA CARD WITH 1MB-16MILLION COLORS
- 14" NON-INTERLACED .28 SVGA "FULL SCREEN" MONITOR
- VLB IDE I/O w/2S, 1P, 1G
- MID TOWER CASE 230W POWER SUPPLY, WITH SECURED DOOR
- 101 ENHANCED KEYBOARD

- LIFETIME LABOR WARRANTY ON ALL SYSTEMS

**VLB 486DX-33 /256K.....\$1399**

**VLB 486DX-50 /256K.....\$1499**

**VLB 486DX2-66/256K.....\$1625**



Configure Your Own System! And We Will Build It For You

### MULTI-MEDIA PACKAGE & TRUE VESA LOCAL BUS SYSTEM

- 486 MOTHERBOARD & INTEL CPU WITH 256K CACHE P24
- 4MB RAM EXPANDABLE TO 32MB
- TEAC 1.2 & 1.44MB FLOPPY DRIVES
- 240MB QUANTUM
- SPIDER VLB SVGA CARD WITH 1MB-16MILLION COLORS
- 14" NON-INTERLACED .28 SVGA "FULL SCREEN" MONITOR
- VLB IDE I/O w/2S, 1P, 1G
- MID TOWER CASE 230W POWER SUPPLY, WITH SECURED DOOR
- 101 ENHANCED KEYBOARD
- LIFETIME LABOR WARRANTY ON ALL SYSTEMS

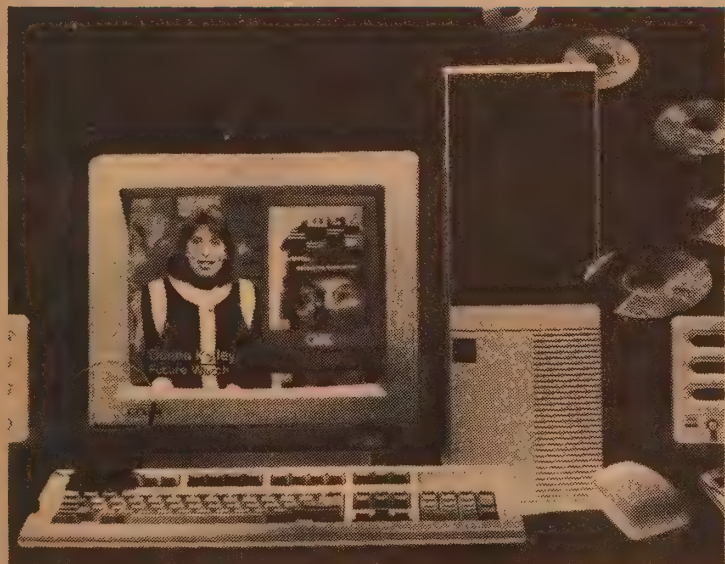
#### MULTI-MEDIA PACKAGE INCLUDES:

- SONY CD-ROM w/PHOTO MULTISESSION
- STEREO MULTI-MEDIA SOUND CARD w/SPEAKERS
- CD SOFTWARE BUNDLE WITH 6 TITLES

**VLB 486DX-33 /256K..\$1775**

**VLB 486DX-50 /256K..\$1925**

**VLB 486DX2-66/256K \$1999**



### BRAND NAME COMPONENTS UPGRADES WHILE YOU WAIT!

#### MONITORS

|                                 |        |
|---------------------------------|--------|
| NEC 3FGE 15" 1024x768.....      | \$CALL |
| NEC 4FGE 15" 1024x768.....      | \$CALL |
| NEC 5FGE 17" 1024x768.....      | \$CALL |
| NEC 5FG 17" 1280x1024.....      | \$CALL |
| NEC 6FG 21" 1280x1024.....      | \$CALL |
| VIEWSONIC 6E 14" 1024x768.....  | \$CALL |
| VIEWSONIC 15 15" 1024x768.....  | \$CALL |
| VIEWSONIC 17 17" 1280x1024..... | \$CALL |
| VIEWSONIC 20 20" 1600x1280..... | \$CALL |
| VIEWSONIC 21 21" 1600x1280..... | \$CALL |

#### VGA CARDS

|                                  |      |
|----------------------------------|------|
| SPIDER VLB 1MB (UP TO 2MB).....  | \$92 |
| ORCHID FAHRENHEIT VLB 1MB.....   | 145  |
| ORCHID FAHRENHEIT VAVL 1MB.....  | 195  |
| ORCHID P9000 VLB 3MB.....        | 365  |
| DIAMOND SPEEDSTAR PRO 1MB.....   | 115  |
| DIAMOND STEALTH PRO 1MB.....     | 265  |
| DIAMOND VIPER VLB P9000 2MB..... | 375  |
| ATI ULTRA PRO 2MB.....           | 365  |

#### MULTI-MEDIA

|                                |       |
|--------------------------------|-------|
| TOSHIBA XM-3401 SCSI INT.....  | \$399 |
| SONY CD-ROM 31A.....           | 175   |
| MITSUMI CD-ROM 0055.....       | 185   |
| GALLANT SOUND CARD SC5000..... | 105   |
| GALLANT SOUND CARD SC6000..... | 145   |
| SPEAKER (80W) WHITE/BLACK..... | 80    |
| CD SOFTWARE (6 TITLES).....    | 85    |

#### MODEMS

|                               |      |
|-------------------------------|------|
| FAX/DATA MODEM 96/24 INT..... | \$50 |
| FAX/DATA MODEM 96/24 EXT..... | 55   |
| FAX/DATA MODEM 14400/.....    |      |
| 14400 INT.....                | 150  |
| FAX/DATA MODEM 14400/.....    |      |
| 14400 EXT.....                | 170  |

#### CASES

|                             |      |
|-----------------------------|------|
| MINI TOWER w/230W.....      | \$45 |
| MID TOWER w/230W.....       | 65   |
| FULL TOWER w/230W.....      | 95   |
| MID TOWER w/DOOR 230W.....  | 92   |
| FULL TOWER w/DOOR 250W..... | 110  |
| MID TOWER BLACK 230W.....   | 95   |
| FULL TOWER BLACK 250W.....  | 115  |

#### MISCELLANEOUS

|                                 |       |
|---------------------------------|-------|
| FULL PAGE SCANNER 600DPI.....   | \$599 |
| COLORADO TAPE BACKUP DJ-20..... | 175   |
| TEAC 1.2 FLOPPY DRIVE.....      | 45    |
| TEAC 1.44 FLOPPY DRIVE.....     | 40    |

MEMORY ♦ HARD DRIVE ♦ CPU  
PLEASE CALL FOR UPDATED  
HARD DISK/CPU/MEMORY PRICES

**TT TECH TREND, INC.**

48501 WARM SPRINGS BLVD. SUITE 106  
FREMONT, CA 94539

(510) 440-8324 ♦ FAX (510) 440-8326

FAX HOTLINE (800) 275-8324

SEE US 7 DAYS A WEEK

COME SEE OUR SHOWROOM

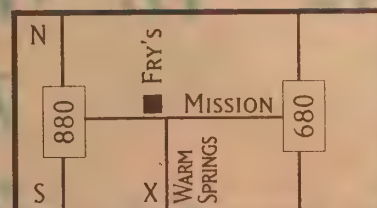
MON-FRI: 10:30-7:30PM

SAT-SUN: SEE US AT A LOCAL  
COMPUTER SHOW NEAR YOU

CREDIT CARDS WELCOME



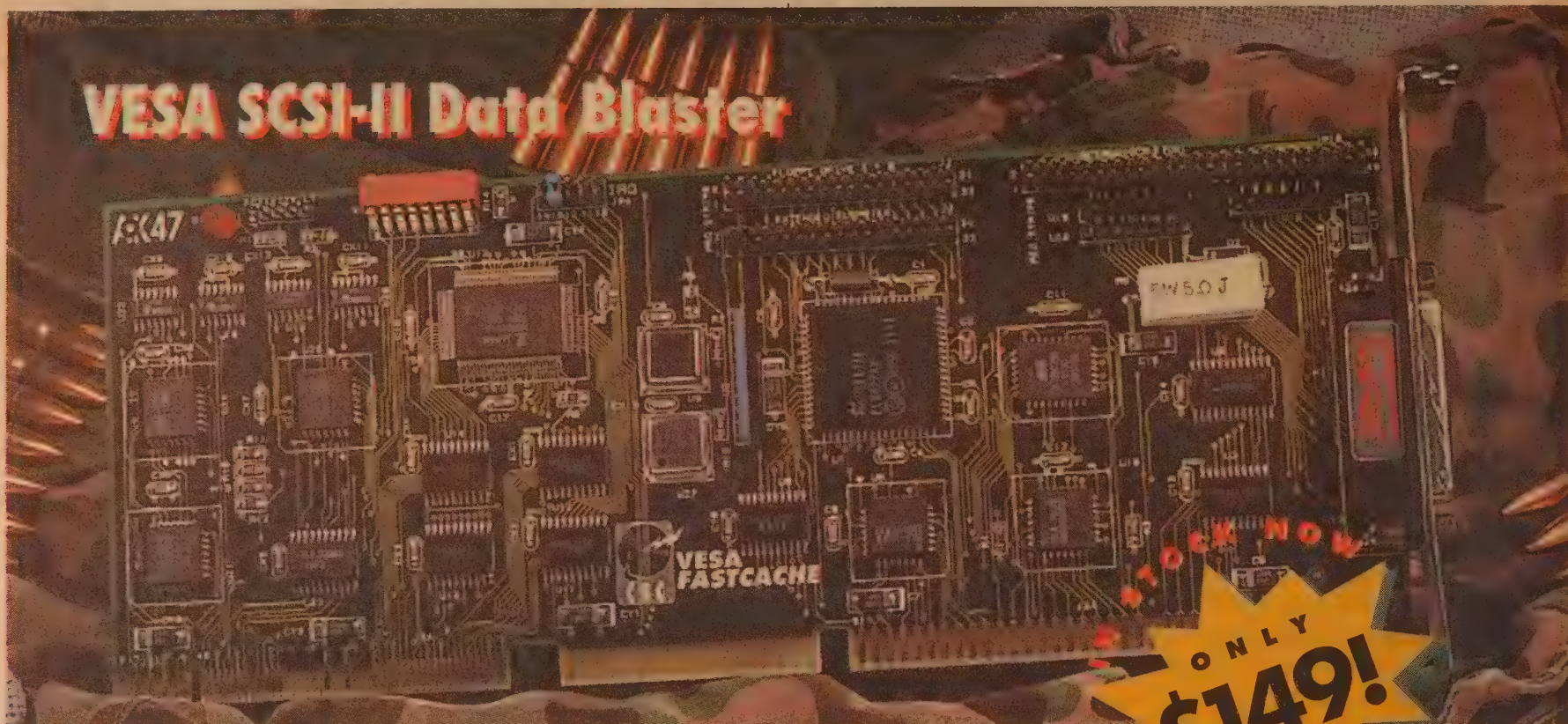
NO SURCHARGE



PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE  
NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS



# VESA SCSI-II Data Blaster



**Faster Than a Speeding Hard Drive! Up to ONE GIG, 35ms Tahiti-1 Optical Drive, Only \$1295!**



These MaxOptix drives use erasable, removable media and perform just like a fast hard drive! Take advantage of this opportunity and order a fully-refurbished drive with a full CSC warranty. Kits are available which include a Megatower enclosure, FastCache controller with 4MB cache, 1GB disk and all the cables, ready to plug and play for \$1595! Bare drive only \$1095.

## AK47

**ONLY \$149!**

**READY TO SHIP**

*Mainframe disk performance at PC prices! Until now, the performance bottleneck in most high end PC's has been the SCSI controller. Not now - CSC's fast VESA SCSI-II non-caching controller literally outruns almost any SCSI drive, blasting data onto the VESA bus. An on-board FLASH BIOS makes it easy to upgrade your controller as new features become available. Just call our BBS and download the latest SCSI codes - lifetime updates are free.*

*Take advantage of the latest improvements in SCSI without switching to a new controller or changing chips! Run up to seven SCSI devices including hard drives, CD-ROM, WORM, erasable optical, DAT and tape drives from a single board! Call today for more information!*



## Brand New, Full-Warranty Seagate's Screamer!

There aren't many good quality, reliable 2 gigabyte disk drives. Seagate's ST42100 model is an exception. This drive design has evolved from the CDC design labs which were purchased by Seagate. In addition to its large storage capacity and decent access time, the 42100 features high-sustained and burst data transfer rates. This drive is a rock solid choice for space hungry applications like workstation imaging and graphics.

• 1900MB+ after format • 13ms access time • Fast SCSI-II interface • **DISCOUNT PRICE \$1695!**

• External kit for SUN/MAC/IBM \$1795 • Kit with CSC VESA SCSI-II controller \$1795!



**NEW SCSI-II \$895**

## Micropolis Monster

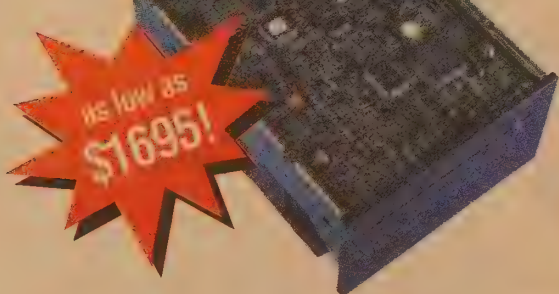
Files just keep getting bigger and bigger! How much space is free on your drive? Don't worry! Our prices on really big drives are getting lower and lower! CSC's special purchase offers you this **NEW, One Gigabyte, SCSI-II Micropolis 1598-15 drive for only \$895!** With a 14.5ms access time and 1GB formatted storage space this internal drive is perfect for those huge spreadsheet or graphic files. Call and order your drive today! The supply is limited.

## Hard Drive Bible

The essential reference manual and software for any dealer and system integrator who installs hard drives. The package includes: VHS video tape; massive listing of parameters and settings; jumper settings; controller card information; formatting answers; installation tips; Seagate's technical support software; CSC's performance test software; and more! Don't be without it!



**ONLY \$39.95**



**as low as \$1695!**



## CORPORATE SYSTEMS CENTER

1294 Hammerwood Ave. Sunnyvale, CA 94089

**Tel. (408) 734-DISK**

**Fax (408) 745-1816**

Prices subject to change. Quantities are limited on some items. All trademarks are property of their respective owners.



# From The Frontier

## *A Little Perspective, Please*

BY MITCHELL KAPOR

In its December 21, 1992 cover story, headlined, "The playground bullies are learning how to type," *Forbes* perpetuated a dangerous myth. This magazine blamed a new generation of "hacker hoods" for an epidemic of computer crime. It grates on me to see these two words—"hacker" and "hood"—used together.

I'll begin by agreeing that computer crime is a real and serious problem. But the *Forbes* cover seemed to blur the distinction between theft and free speech, between adventuresome teenagers and crooks. Most hackers are just playing around or swapping information; only a minority are out to steal it. Hackers are not hoods, though a few may be.

If I sound sensitive on this point, I have good reason. In the summer of 1990 John Perry Barlow and I founded the Electronic Frontier Foundation to challenge Secret Service seizures of computer bulletin board systems. Our goal was simple enough. We wanted to establish that the Bill of Rights

ties, many of whom see it as more lucrative and safer than the drug business. Hardly your typical hacker.

If the typical seventeen-year-old hacker gets caught stealing small amounts of phone service or breaking into a computer system where he has no business being, he's scared as hell, and ready to confess. He's highly unlikely to do it again. These first-time offenders don't usually end up ever again on the business end of one of Detective Delaney's warrants. There is no reason for bringing the full force of the law down on kids like this.

So I was peeved at a *Forbes* cover that seemed to lump these kid pranksters in with hardened crooks. Such broad bracketing leads to excesses like those of the Secret Service in the recently decided Steve Jackson Games case. Federal Judge Sam Sparks found that the Secret Service illegally seized the private electronic mail of users of a customer relations bulletin board system operated by the Jackson firm.

submitted computer crime legislation based on a report of his Commission on Computer Technology & Law, which I chaired. Commission members included law enforcement officials, such as a bulletin board system-literate district attorney, representatives from the computer and telecommunications industries, and civil libertarians.

The commission determined that much of what is labeled "computer crime" would constitute a crime regardless of the particular means of accomplishment. Theft of a lot of money funds through manipulation of computer accounts is grand theft. Does the computer make it any grander?

Our commission reported, and Governor Weld agreed, that changes to the law, where needed to plug gaps, are best accomplished by modifying existing law and building off familiar legal principles, not by passing overly broad and untested laws specifically covering computer crime.

*The Massachusetts experience shows that it's possible for civil libertarians, law enforcers, and industry experts to find common ground; they can address problems created by the spread of computers without compromising rights. This is the story the media ought to pay more attention to. Enough of these fantasies about dangerous teenagers stealing big money and compromising national security.*

We found, for instance, that unauthorized access to a computer system is not, by itself, a violation of Massachusetts law. It should be. We therefore recommended an

applies in cyberspace as well as on Main Street. We wanted to help assure that law enforcement people, while fighting crime, do not violate the free speech and privacy rights of computer bulletin board users. We made one principle clear from the start: "Unauthorized entry into computer systems is wrong and should be illegal."

Big high-tech rip-offs these days have to do with the theft of cellular and PBX codes, which can run up victims' phone bills into the hundreds of thousands of dollars. According to Donald Delaney, a New York State Police investigator who specializes in this area, major telecom fraud is typically committed by career criminals in their thir-

At the trial, Judge Sparks roasted Secret Service agent Tim Foley for not making a simple investigation in advance that would have shown there was no cause to snoop on email. The case demonstrates that accusations of computer crimes should be limited to cases involving seriously harmful behavior and injurious intent, not the mere suspicious use of a computer or a network.

### CASE HISTORY: MASSACHUSETTS

In Massachusetts, efforts to put such a balanced perspective into law are now underway. Governor William Weld has

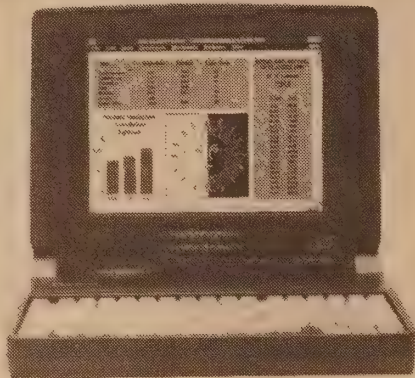
added to the criminal law covering electronic trespass with penalties of up to \$1,000 in fines or thirty days in jail. The proposed statute states that the requirement of a password constitutes the equivalent of a posted "No Trespassing" sign.

The Massachusetts experience shows that it's possible for civil libertarians, law enforcers, and industry experts to find common ground; they can address problems created by the spread of computers without compromising rights. This is the story the media ought to pay more attention to. Enough of these fantasies about dangerous teenagers stealing big money and compromising national security. ■



# GIANT BLOWOUT SALE!

## COMPAQ



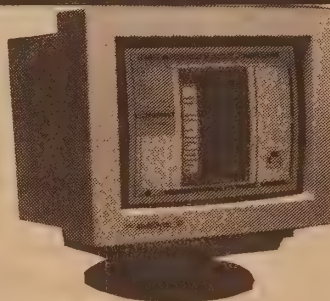
|                                |         |
|--------------------------------|---------|
| CPAQ LTE LITE/25E/84MB.....    | \$2,855 |
| CPAQ LTE LITE/25E/120MB.....   | \$2,648 |
| CPAQ LTE LITE/25C/84MB.....    | \$3,023 |
| CPAQ LTE LITE/25C/120MB.....   | \$3,255 |
| CPAQ LTE LITE/ 4/25/120MB..... | \$2,569 |
| CPAQ LTE LITE/4/25/209MB.....  | \$2,855 |
| CPAQ LTE LITE/4/25E/120MB..... | \$3,157 |
| CPAQ LTE LITE/4/25E/209MB..... | \$3,443 |
| CPAQ LTE LITE/4/25C/120MB..... | \$3,899 |
| CPAQ LTE LITE/4/33C/120MB..... | CALL    |
| CPAQ LTE LITE/4/33C/209MB..... | CALL    |
| CPAQ PROLINEA/3/25S/120MB....  | \$1,007 |
| CPAQ PROLINEA/4/33/120MB.....  | \$1,570 |
| CPAQ PROLINEA/4/33/240MB.....  | \$1,761 |
| CPAQ PROLINEA/4/33/340MB.....  | \$1,904 |
| CPAQ DESKPRO/4/33I/120/8.....  | CALL    |
| CPAQ DESKPRO/4/33I/240/8.....  | CALL    |
| CPAQ DESKPRO/4/33I/340/8.....  | CALL    |
| CPAQ DESKPRO/4/66I/120/8.....  | CALL    |
| CPAQ DESKPRO/60M PENTIUM....   | \$4,378 |
| CPAQ DSKPRO/M60/240/PENT....   | \$4,759 |
| CPAQ DSKPRO/M60/510/PENT....   | \$5,235 |
| CPAQ DSKPRO/M60/510/PENT....   | \$6,663 |

## RADIUS



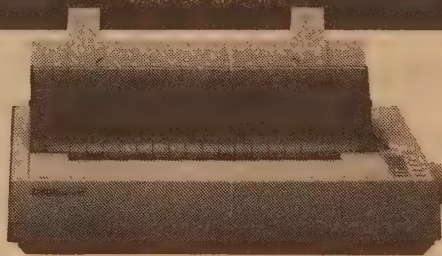
|                                |         |
|--------------------------------|---------|
| RADIUS FULL PAGE MONO.....     | \$436   |
| RADIUS PIVOT MONO.....         | \$555   |
| RADIUS 2 PAGE MONO 19" .....   | \$634   |
| RADIUS 2 PAGE MONO 21" .....   | \$790   |
| RADIUS 2 PAGE 21E, LOW EMISS.. | \$1,027 |

## NEC



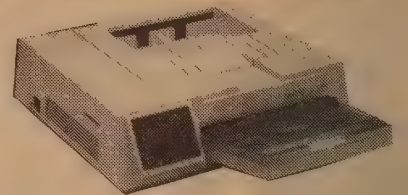
|                              |         |
|------------------------------|---------|
| NEC 3 FGE MONITOR.....       | \$599   |
| NEC 4 FGE MONITOR.....       | \$716   |
| NEC 5 FG MONITOR.....        | \$1,289 |
| NEC 6 FG MONITOR.....        | \$2,369 |
| NEC SILENTWRITER MDL 95..... | \$896   |

## EPSON



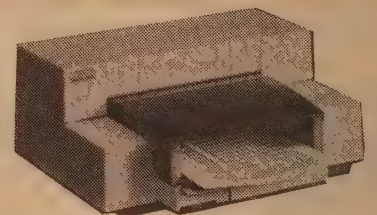
|                                  |       |
|----------------------------------|-------|
| EPSON FX-1170 PRINTER 9-PIN..... | \$357 |
| EPSON FX-870 9-PIN 80 COLUMN.... | \$274 |
| EPSON LQ-570 ULTRA LTR QLITY.... | \$245 |
| EPSON ACTION LASER 1500, 6PPM..  | \$666 |

## OKIDATA



|                                  |       |
|----------------------------------|-------|
| OKIDATA ML520 9-PIN 80 COL.....  | \$363 |
| OKIDATA ML320 9-PIN 80 COL.....  | \$302 |
| OKIDATA ML321 9-PIN 132 COL..... | \$423 |
| OKIDATA OL400E,4PPM,300DPI.....  | \$511 |

## HEWLETT-PACKARD



|                                     |         |
|-------------------------------------|---------|
| HP OMNIBOOK 300/2/10FLSH.....       | CALL    |
| HP OMNIBOOK 300/2/40MBHD....        | CALL    |
| HP SCANJET IIP W/PC-AT INTFC....    | \$689   |
| HP SCANJE W/MAC INTFC.....          | \$689   |
| HP SCANJET IIC/COLOR F/PC.....      | \$1,254 |
| HP SCANJET IIC/COLOR F/MAC....      | \$1,254 |
| HP DESKWRITER INKJET F/MAC....      | \$289   |
| HP DESKJET 500 INKJET 2 PPM.....    | \$289   |
| HP DESKJET 550C COLOR INKJET....    | \$569   |
| HP DESKWRITER 550C CLR/2 PEN....    | \$569   |
| HP DESKJET 1200C PRINTER.....       | \$1,332 |
| HP DESKJET 1200C/PS POSTSCPT....    | \$1,881 |
| HP DESKWRITER C COLOR F/MAC....     | \$384   |
| HP DESKJET 500C COLOR F/PC.....     | \$384   |
| HP DESKJET PORTABLE INKJET.....     | \$376   |
| LASERJET 4/8PPM/600DPI/2 RM....     | \$1,349 |
| LASERJET 4M/8PPM/600DPI/6RM....     | \$1,881 |
| HP LASERJET 4L/4PPM.....            | \$659   |
| HP LASERJET 4ML,POSTSCRIPT.....     | \$999   |
| LASERJET 4SI/17PPM,600DPI/2/...CALL |         |
| LASERJET 4SI MX/POST II/10MB...CALL |         |

# COMPUTERLAND OF SERRAMONTE

## WAREHOUSE OUTLET

Call Now! While Available!

(415)•615•9020

Prices good until 10/10/93

Fax: (415)•615•0844

New Extended Hours!  
Mon-Fri 8:30am-7pm  
Saturday 10am-5pm

409 So. Spruce Avenue  
South San Francisco, CA 94080

On-the-spot  
rebates.  
On-target  
solutions.

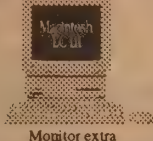


Apple, the Apple logo, LaserWriter, LocalTalk, and Macintosh are registered trademarks of Apple Computer Inc. AppleCD, Macintosh Centris, and PowerBook are trademarks of Apple Computer Inc.. Rebate offer valid through September 30, 1993. Must take delivery of products during the promotional period in order to qualify for selected rebates. Rebates available only through participating Authorized Apple resellers.



# GIANT APPLE BLOWOUT SALE!

## Apple® Macintosh® LC III



The powerful choice for education or business.

•4MB RAM, 80MB HD

**\$1199**

With 4MB RAM, 160MB HD

**\$1323**

Monitor extra

## Apple Macintosh Color Classic



Built-in screen displays 256 colors. Easy to transport.

•4MB RAM, 80MB HD

after rebate  
**\$1079**

## Apple Macintosh Centris™ 610



Exceptional processing power at an affordable price.

•4MB RAM, 80MB HD

WITH ETHERNET

after rebate

**\$1339**

after rebate

With 230MB HD **\$1795**

With 230MB & CD **\$1963**

Monitor & keyboard extra

## Apple Macintosh Centris 650



High performance. Maximum flexibility.

•8MB RAM, 230MB HD

**\$2107**

With 230MB & CD **\$2428**

With 500MB HD **\$2657**

Monitor & keyboard extra

## Apple Macintosh Centris 660AV



High performance. Maximum flexibility.

•8MB RAM, 230MB HD

**\$2126**

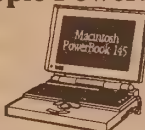
With 230MB & CD **\$2389**

With 500MB HD **\$2679**

With 500MB & CD **\$2944**

Monitor & keyboard extra

## Apple Powerbook™ 145B



Notebook convenience. Macintosh performance.

•4MB RAM, 40MB HD

**\$1289**

With 4 MB RAM, 80MB HD

**\$1495**

## Apple Powerbook 160



Built-in support for a variety of monitors.

•4MB RAM, 40MB HD

after rebate  
**\$1432**

after rebate

With 80MB HD **\$1754**

With 120MB HD **\$2074**

## Apple Powerbook 165c



Built-in color display with 256 colors.

•4MB RAM, 80MB HD

after rebate  
**\$1721**

after rebate

With 120MB HD **\$1964**

120MB & modem **\$2189**

## Apple Powerbook 180



High performance and incredible speed.

•4MB RAM, 80MB HD

after rebate  
**\$2349**

after rebate

With 120MB HD **\$2594**

120MB & modem **\$2819**

## Apple Powerbook 180C



High resolution active matrix color display with 256 colors.

•4MB RAM, 80MB HD

**\$2959**

With 160MB HD **\$3203**

160MB & Modem **\$3429**

## Apple Macintosh Quadra™ 840AV



Maximum performance in a compact design.

•8MB RAM, 230MB/CD

**\$3559**

8RAM, 230MBHD **\$3291**

16RAM, 500MBHD **\$4141**

16RAM, 500MB/CD **\$4408**

Monitor & keyboard extra

## Apple StyleWriter® II, 360 X 360 resolution \$305

Apple Stylewriter® Portable **\$397**

Apple LaserWriter® Select 300 **\$729**

Apple LaserWriter® Select 310 **\$961**

Apple LaserWriter Pro 600 after rebate **\$1769**

Apple LaserWriter Pro 630 600 X 600 dpi **\$2252**

Apple Macintosh 16" Color Display **\$1174**

AppleCD™ 300 High speed and high performance **\$382**



# COMPUTERLAND OF SERRAMONTE

## WAREHOUSE OUTLET

Fax: (415)•615•0844

New Extended Hours!

Mon.-Fri. 8:30am - 7pm

Saturday 10am - 5pm

409 So. Spruce Avenue  
South San Francisco, CA 94080

Call Now! While Available!

**(415)•615•9020**

Prices good until 9/30/93

On-the-spot  
rebates.  
On-target  
solutions.



Apple, the Apple logo, LaserWriter, LocalTalk, and Macintosh are registered trademarks of Apple Computer Inc. AppleCD, Macintosh Centris, and PowerBook are trademarks of Apple Computer Inc. Rebate offer valid through September 30, 1993. Must take delivery of products during the promotional period in order to qualify for selected rebates. Rebates available only through participating Authorized Apple resellers.



# BUSINESS SOLUTIONS

## Bicom

### Small Machine, Full Power

*Also: IBM, HP, PCMCIA and More*

**BY MITSU  
HADEISHI**

#### Resources:

##### **Bicom B260i**

ABC Computer  
2531 237th St.  
Ste. 122  
Torrance CA 90505  
(310)325-4005

##### **Caviar Ultralite CU140**

1.8" hard disk drive  
Western Digital Corp.  
8105 Irvine Center Dr.,  
Irvine, CA 92718  
(714)932-5000

##### **DataTrek fax modem and Ethernet PCMCIA cards**

DataTrek Corporation  
4505 Wyland Dr.  
Elkhart, IN 46516  
(219)522-8000

**B**etween the palmtop and the notebook lies the category of the subnotebook: machines usually around three to four pounds, with full-sized screens and keyboards that you can touch-type on, but a few pounds lighter and a few inches smaller than the typical notebook computer. Hewlett-Packard recently entered the subnotebook competition with the introduction of its Omnibook 300, a powerful yet (relatively) lightweight machine.

Some have suggested, however, that there is yet another category of machine between the palmtop and the subnotebook: the sub-subnotebook, larger than a palmtop, but still light enough to feel super-portable.

The \$795 Bicom B280i is a very good example of this category. At 6.3" x 8.9" x 1.2", it's too large to fit in a small pocket; however, as small as a typical hardcover book. Weighing just 2.2lbs., it's a lot lighter than the HP Omnibook or similar subnotebooks, yet it houses a 60MB hard disk, 2MB of RAM, and a 286 processor running at 16 MHz. (A newer unit based on the 386SL processor is apparently the next

The display is an enhanced CGA-compatible with a resolution of 640 x 400 pixels at 16 levels of greyscale. Windows 3.0 and 3.1 display drivers are provided (though you must purchase and install Windows itself separately), and DR-DOS 5.0 comes installed. The unit is powered by five 1.5 V AA batteries, and comes with nickel metal hydride rechargeables.

In addition to DR-DOS, the unit ships with file transfer software, allowing you to transfer files to and from your desktop PC using the supplied cable (therefore it is not necessary to purchase the optional external floppy drive unit). A PCMCIA 2.0 Type I slot is provided, allowing you to add fax modems, Ethernet cards, or more memory to the unit. The keyboard is quite usable and one can indeed touch-type on it, though the function keys require that you use a special "Fn" shift button (since they are sharing the numeric keys at the top of the keyboard). This isn't a problem for many users, but if you're a WordPerfect user it could be quite inconvenient.

The B280i ships with a small amount of built-in organizer functionality, including simple clock/calendar, scheduler, world time, memo, alarm clock, and financial calculator functions. It also comes with a graphical file manager

called Viewmax. An external floppy drive is available for \$195.

The built-in organizer software is not particularly powerful and is somewhat clumsy to use—far less powerful than that provided even in a low-end Sharp or Casio organizer. For example, the calendar function displays schedule items with a little dot next to the date (like the Sharp or the Casio), but you cannot jump to the schedule items using the Enter key, as you can in other, better-designed, organizers. However, it does provide minimal functionality, and as a bonus it uses a built-in 256K of nonvolatile RAM, and thus it

doesn't use up the battery with unnecessary hard disk access. A file conversion utility is also provided to export the format to SideKick or dBASE.

The battery situation is somewhat disappointing. Though Bicom claims up to three hours of continuous use on a full charge, the salesperson at a store I recently visited said that in their experience typical battery life was only one to two hours of solid use. The Bicom does come with a number of power management options, however, and if you were to install a Flash Disk card and use it for your primary storage instead of the internal hard disk, you could also extend battery life considerably.

Another battery-related problem is that the charger has no autosensing facility to turn it off when the batteries are fully charged. Nickel metal hydride rechargeable batteries can get damaged if overcharged, so this is something of an oversight in the design. However, these design tradeoffs were probably made to keep the overall weight of the unit as low as possible.

Despite the drawbacks, if I wanted to take a computer with me while travelling I would seriously consider this machine. Though underpowered compared to a full-sized notebook or desktop computer, it is quite usable for basic telecommunications, word processing, and even simple spreadsheet computations. Its low weight and unobtrusiveness make it ideal for those who like to travel light, yet it is powerful enough to handle many everyday computing chores, including the ability to run real Windows applications. After all, it wasn't too long ago that the specifications of this machine would have made a more than adequate desktop computer.

I have had some difficulty contacting the manufacturer of the machine, however, indicating that phone support might be lacking or even nonexistent. One can only expect, however, that as this class of

## PENS AND PALMTOPS

##### **EMBARC**

EMBARC  
1500 N.W. 22nd Ave.  
Boynton Beach, FL  
33426-8292  
1-800-EMBARC

##### **HP Omnibook 300**

Hewlett-Packard  
1-800-538-8787

in the series, but was not available at the time of this review.)

The difference between a 4lb. subnotebook and a 2.2lb. sub-subnotebook doesn't seem like much, but it really is quite noticeable. Whereas the HP Omnibook 300 looks and feels like a notebook computer, the Bicom seems almost too small and light—you open it and half expect it to be just a toy computer, or even a calculator. But no, the Bicom is capable enough to run Windows 3.1, and this is just an example of a growing number of machines that will continually increase in power to match that of the notebook and the desktop machine.

Copyright © 1993 by  
Mitsu Hadeishi. All rights  
reserved.





# Positive Solution Computer, Inc.

DBA PS Computer



COD



## Multi-Media On Display

### We Will Repair or Upgrade Your System!

#### PS 486 VESA Local Bus 256K Cache System

Intel is using the Same Motherboard to Demo  
the Pentium Chip at Comdex '93

- Pentium Upgradable with ZIP Chip Socket on Motherboard
- 8MB RAM (70ns) exp. to 32MB
- 250MB Conner (14ms) Hard Drive
- 1.2MB 5.25" and 1.44MB 3.5" Floppy Drives
- 32 bits IDE VESA LB Controller
- 2 Serial, 1 Parallel, and 1 Game Ports
- 32 bits Cirrus Logic VESA Local Bus SVGA Card w/ 1MB Memory
- Mini tower or Desktop Case with Power Supply
- 101 Enhanced Keyboard
- 3-Button High Quality Mouse
- 14" Proton 1280x1024, .28 SVGA Non-Interlaced Monitor • CPU Cooling Fan
- 7 Year Labor Warranty, 1 Year Parts

486DX2-66MHz  
\$1835

486DX-33MHz  
\$1625

#### PS 486DX-50MHz 256K Cache System

- 4MB RAM (70ns) Expandable to 32MB
- 250MB Conner (14ms) Hard Disk
- 1.2MB 5.25" and 1.44MB 3.5" Floppy Drives
- 1:1 Interleave 2HD/2FD IDE Controller
- 2 Serial, 1 Parallel, and 1 Game Ports
- Real Time Clock w/Battery Backup
- Mini tower or Desktop Case with Power Supply
- 101 Enhanced Keyboard
- 1MB Trident SVGA Card
- Proton 14" (non-interlaced) 1280 x 1024, .28 dot SVGA monitor
- 3-Button High Quality Mouse
- CPU Cooling Fan
- 7 Year Labor Warranty, 1 Year Parts

\$1455

#### PS 486DX-33MHz 128K Cache System

- 4MB RAM (70ns) Expandable to 32MB
- 120MB Conner HD
- 1.2MB 5.25" and 1.44MB 3.5" Floppy Drives
- 1:1 Interleave 2HD/2FD IDE Controller
- 2 Serial, 1 Parallel, and 1 Game Ports
- Real Time Clock w/Battery Backup
- Mini tower or Desktop Case with Power Supply
- 101 Enhanced Keyboard
- 1MB Trident SVGA Card
- Arche 14" 1024x768, .28 dot SVGA monitor
- 3-Button High Quality Mouse
- Heat Sink for CPU w/486
- 7 Year Labor Warranty, 1 Year Parts

\$1215

PS 386DX-40MHz/128K Cache

\$945

## MULTIMEDIA PRODUCTS

#### COMPVIDEO 2 Image Viewing Card/Box (VGA to TV Converter)

- Put RGB Signal from VGA Output to TV (NTSC/PAL)
- Presents Your Text/Graphics to TV/VCR without Flicking
- Card Type (for Desktop PC) or Box Type (for Notebook).

\$295

#### COMPVIDEO 3 Image Capture Board (Frame Grabber)

- Realtime Color Video Digitizer with Scale, Crop, Zoom functions
- Puts 2 Million Colors to VGA Modes 640x480 w/64K High Color
- 2 Stereo Input (4 Stereo Modes). Links w/Sound Card.
- Supports Microsoft AVI driver.

\$385

#### Powerblaster plus microphone

- 100% Soundblaster compatible

\$58

NEW!

#### Concurrent's New 5 in 1 Audio Board

Concurrent Sound System™, the world's leading audio board, has the highest level of software compatibility and amazing hardware performance. It gives you simultaneous hardware compatibility with Adlib™ (FM Music), Sound Blaster™ (8 bit audio), Microsoft™ Windows Sound System (16 bit audio) Roland™ MT32 & SCC-1 (PCM Music) & General MIDI™ Instrument, Windows 3.1 (MPC) Audio Level II, and is equipped with a CD-ROM Interface

\$350

Come in and let us show you this amazing product!

#### AT-75 Super HI-FI Amp SP

- Full Range Loud Speakers 4x4"
- Power Output 80 Watts PMPO
- Color White or Black

\$100

25 Watt 50 Watt  
\$40 \$60

#### Mitsumi CD-ROM 16bit Controller Card

\$179

#### AC Traveler Converter

Plugs into your cigarette lighter for on-the-road AC power. Converts the energy of any 12-volt car, boat, plane or RV battery into 140 watts of AC power.

\$89

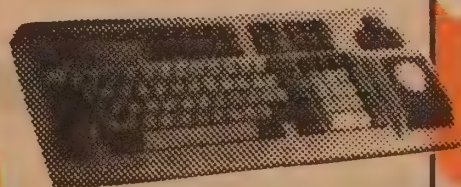
| Title                                   | Price | Mixed-up Mother Goose                     | 26 |
|-----------------------------------------|-------|-------------------------------------------|----|
| 14000 Public Domain Software            | 20    | Monkey Island                             | 30 |
| A Christmas Carol                       | 27    | Money, Money, Money                       | 25 |
| A Survey of Western Art (English)       | 30    | Mowgli's Brothers                         | 18 |
| Aesop's Fables                          | 18    | Mozart                                    | 15 |
| Animals V.10                            | 21    | Multimedia Computer Tutor                 | 30 |
| Audobons Birds of America               | 20    | Moving Fantasies (Adult Movie)            | 35 |
| Audobons Mammals                        | 20    | Sound Blaster Master Disc w/Windows 3.1   | 25 |
| Art History Ency. Vol 1 (Spanish)       | 38    | My First Time (Adult Movie, 2 Disc)       | 59 |
| Barron's College Guide                  | 36    | National Geographic Mammal                | 38 |
| Battle Chess                            | 26    | PC Karaoke                                | 30 |
| Beauty and the Beast                    | 15    | Peter and the Wolf                        | 15 |
| Business Background                     | 20    | Playing with Language - German            | 25 |
| Business Assistant                      | 15    | Playing with Language - Spanish           | 25 |
| CD Game Pack II                         | 15    | Playing with Language - French            | 25 |
| CD Game Pack II                         | 30    | Playing with Language - English           | 25 |
| CD Storytime                            | 42    | Playing with Language - Japanese          | 25 |
| Chessmaster 3000 Multimedia             | 25    | Publish It                                | 32 |
| Cica MS Windows (Utility, Fonts, Etc.)  | 20    | Renaissance Master I                      | 27 |
| Color It                                | 25    | Renaissance Master II                     | 27 |
| Colossal Cookbook                       | 30    | Secret Weapon of the Luftwafe             | 25 |
| Compton's Family Choice                 | 25    | Shakespeare on Disc                       | 20 |
| Compton's Family Encyclopedia           | 47    | Sherlock Holmes on Disc                   | 17 |
| Compton's Interactive Encyclopedia      | 185   | Sleeping Beauty                           | 15 |
| Compton's Multimedia Encyclopedia (DOS) | 99    | Software Juke Box                         | 22 |
| Compton's Multimedia Encyclopedia (WIN) | 99    | Sound Effect Library                      | 32 |
| Compton's Multimedia Encyclopedia       | 125   | Sound Library (CD, Wave, Midi)            | 20 |
| Desert Storm: War in the Persian        | 27    | Space Quest IV                            | 28 |
| Don Quixote                             | 20    | Sport's Best                              | 30 |
| Deep Voyage                             | 29    | Stellar 7                                 | 25 |
| Eco Quest                               | 30    | Talking Classic Tales                     | 45 |
| Family Doctor                           | 22    | Talking Jungles Safari                    | 45 |
| Family Education Collections            | 40    | The Family Education Collection           | 33 |
| GIFs Galore (Color Images)              | 20    | The Star Child                            | 15 |
| Great City of the World                 | 25    | The White Horse Child                     | 15 |
| Guinness Disc of Records '93            | 25    | Time Table Science & Innovation           | 38 |
| Guinness Disc of Records '92            | 23    | Time Table Art & Entertainment            | 30 |
| Impressionism & Its Sources             | 32    | Time Table Bus, Pol., & Media             | 30 |
| Interactive Storytime Vol. 1            | 20    | Toolworks Multimedia Encyclopedia         | 77 |
| Interactive Storytime Vol. 2            | 20    | Toolworks Reference Library               | 30 |
| Island Design                           | 26    | Total Baseball                            | 30 |
| Jets & Props                            | 22    | The Adult Reference Library               | 42 |
| Jones in the Fast Lanes                 | 25    | The California Collection (Shareware)     | 15 |
| Jokes & Pranks                          | 16    | The Original Shareware 1992               | 15 |
| KGB / CIA                               | 27    | The New Basics Electronic Cookbook        | 35 |
| King Quest V                            | 25    | U.S. World Atlas Combo                    | 36 |
| Library of the Future (450 Titles)      | 82    | Visual Fantasies I (Adult Picture)        | 45 |
| Loom                                    | 25    | VGA Spectrum                              | 15 |
| Learning Adventure                      | 16    | Where in the World is Carmen Sandiego     | 40 |
| Majestic Places                         | 20    | Wild Places                               | 20 |
| Mammals by National Geographic          | 25    | Wind Commander / Ultima VI                | 25 |
| Mavis Teaches Typing                    | 25    | Wizard                                    | 10 |
| Mayo Clinic Family Health Book          | 26    | World View                                | 18 |
| Midi Music Workshop                     | 32    | World Atlas for V3.2                      | 25 |
| Mother Goose                            | 22    | World Library (Greatest Books Collection) | 30 |
|                                         |       | World Library (Electronic Home Library)   | 35 |

### SPECIALS

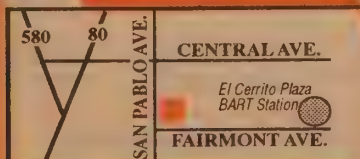
|                                                       |         |                                      |      |
|-------------------------------------------------------|---------|--------------------------------------|------|
| Full Page Scanner 600 dpi Color                       | \$599   | Medium Tower w/230 Watt Power Supply | 75   |
| Proton 14" 1280x1024, .28 SVGA Non-Interlaced Monitor | 280     | Full Tower w/250 Watt Power Supply   | 99   |
| 120/250MB Colorado Tape Backup                        | 145/180 | Desktop Case w/200 Watt Power Supply | 65   |
| 9600 FAX Send 2400 Internal Modem                     | 35      | 3-Button Mouse                       | 9.50 |
| 9600 FAX/2400 Modem                                   | 50      | Logitech Mouseman                    | 45   |
| w/Bit FAX for Windows                                 | 50      | New Microsoft Curve Mouse            | 65   |
| 9600 FAX/2400 Modem Pocket                            | 95      | Microsoft Mouse                      | 50   |
| 14,400 FAX/14,400 Modem                               | 145     | Logitech Trackman                    | 75   |
| Mini Tower w/200 Watt Power Supply                    | 55      |                                      |      |

#### KeyCat Keyboard

101 Enhanced Keyboard with built-in serial trackball mouse



\$60



10032 San Pablo Ave.  
El Cerrito, CA 94530  
TEL. (510) 527-6908

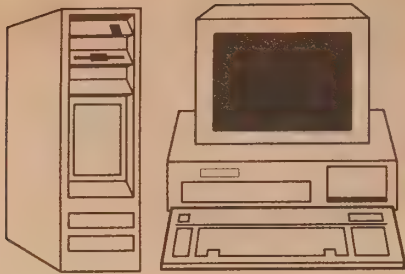
OPEN 6 DAYS

Mon-Sat: 9:30am to 6pm  
FAX (510) 527-3823

Resellers Only  
Wholesale Club  
Call in for wholesale price list  
800-597-0222

You Can Count on Our Best Price and Qualified Service! • 7 Years Labor & 1 Year Parts Warranty!

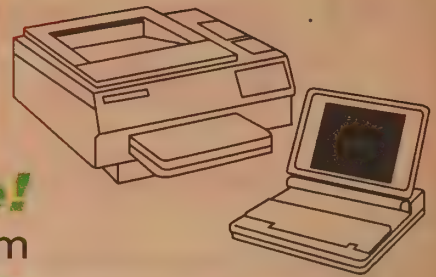




# Compu Mart

**Quality, Service and Value!**

Experience it in our Ultra Modern Showroom



## COMPLETE PC SYSTEMS BY OPTIGOLD

### ALL SYSTEMS ARE FCC CLASS B, 14" SVGA MONITOR INCLUDED

|                       |         |
|-----------------------|---------|
| 486SX-25/4M/120MB HD  | \$1,020 |
| 486DX-33/4M/120MB HD  | \$1,215 |
| 486DX2-50/4M/120MB HD | \$1,300 |
| 486DX-50/4M/120MB HD  | \$1,290 |
| 486DX2-66/4M/120MB HD | \$1,430 |
| 386SX-33/2M/40MB HD   | \$699   |
| 386DX-40/4M/120MB HD  | \$950   |

VLB or EISA motherboards are available by AMI, Micronics, NICE, AIR, Orchid

### NOTEBOOK PC

|         |                                    |         |
|---------|------------------------------------|---------|
| CHAPLET | 386SX-33/2MB/60MB HD               | \$ 975  |
|         | 486DX-33/4MB/120MB HD              | \$1,550 |
| AVANTI  | 486SL-25/4MB/120MB HD W/ Fax Modem | \$1,750 |
| PETRA   | 486DX-33/4MB/120MB                 | \$1,850 |
| TOSHIBA | 4600C/4MB/200MB HD Active Color    | \$4,375 |
|         | 1900/4MB/120MB HD                  | \$1,795 |

### DRIVES

|         |                      |             |
|---------|----------------------|-------------|
| Seagate | 40MB IDE             | \$129       |
|         | 1GB SCSI             | \$939       |
| Conner  | 120MB IDE            | \$169       |
|         | 170MB IDE            | \$189       |
|         | 200MB SCSI           | \$229       |
|         | 250MB IDE            | \$229       |
|         | 360MB SCSI           | \$359       |
| Fujitsu | 540MB IDE/SCSI       | \$649       |
| Quantum | 85MB IDE/127MB IDE   | \$175/\$175 |
|         | 240MB IDE            | \$245       |
|         | 1GB SCSI             | \$899       |
| Maxtor  | 213MB IDE            | \$235       |
|         | 245MB IDE            | \$229       |
|         | 340MB IDE/SCSI       | \$299/\$389 |
| WD      | 212MB IDE/340 MB IDE | \$229/\$299 |

### MONITORS

|           |                                   |        |
|-----------|-----------------------------------|--------|
| ADI       | 14" Microscan 3G NI Low Radition  | \$ 369 |
| KFC       | 15" .28 1024x768 NI Flat Digital  | \$ 450 |
|           | 17" .26 1280x1024 NI Flat Digital | \$ 789 |
| MGC       | 14" .28 1280x1024 NI XGA          | \$ 309 |
|           | 15" .28 1280x1024 NI Flat XGA     | \$ 405 |
| MAG       | MX15F 15" .28 NI Flat             | \$ 539 |
|           | MX17F 17" .28 NI Flat             | \$ 975 |
| NANAO     | F5501 17" .28 1280x1024           | \$1079 |
|           | F5501W 17" .28 1280x1024          | \$1115 |
| NEC       | 3FGe 15" .28 NI Flat              | \$ 589 |
|           | 4FGe 15" .28 NI Flat              | \$ 699 |
|           | 5FGe 17" .28 NI Flat              | \$1099 |
|           | 6FG 20" .28 NI Flat               | \$2335 |
| Viewsonic | VSC6E 14" .28 NI                  | \$ 309 |
|           | VSC15 15" .28 NI                  | \$ 529 |
|           | VSC7 17" .28 NI                   | \$ 949 |
|           | VSC17 17" .28 NI                  | \$1065 |
|           | VSC20 20" .31 NI                  | \$1769 |

### VIDEO BOARDS

|          |                               |             |
|----------|-------------------------------|-------------|
| ATI      | Graphic Ultra + 1MB/ 2MB      | \$219/\$269 |
|          | Graphic Ultra Pro 2MB         | \$369       |
|          | Graphic Ultra Pro VLB 1MB/2MB | \$299/\$355 |
| Diamond  | SpeedStar Pro VLB/ISA 1MB     | \$130       |
|          | Stealth 24 ISA/VLB 1MB        | \$175       |
|          | Stealth Pro VLB 1MB/ 2MB      | \$265/\$365 |
|          | Viper 2MB VLB                 | \$395       |
| Orchid   | Fahrenheit 1280+ 1MB          | \$159       |
|          | Fahrenheit VA 1MB             | \$169       |
|          | Fahrenheit VLB 1MB            | \$159       |
|          | Fahrenheit VA/VLB 1MB         | \$219       |
|          | Fahrenheit P9000 VLB 3MB      | \$369       |
| Paradise | Windows Accel 1MB             | \$135       |
| Tseng    | ET4000VLB                     | \$125       |

### TAPE BACK-UP

|           |                            |            |
|-----------|----------------------------|------------|
| Colorado  | DJ-10 120MB Int            | \$145      |
|           | DJ-20 250MB Int            | \$175      |
|           | QFA 700 700MB w/ Control   | \$599      |
| Trakker   | 120MB/250MB Printer port   | \$295/359  |
| PowerTape | 2GB SCSI Internal/External | \$959/1155 |

### MULTIMEDIA

|              |                             |       |
|--------------|-----------------------------|-------|
| Creative Lab | Sound Blaster               | \$ 81 |
|              | Sound Blaster Pro Deluxe    | \$119 |
|              | Sound Blaster 16            | \$169 |
|              | Sound Blaster 16 ASP        | \$219 |
|              | Wave Blaster                | \$225 |
|              | Video Blaster               | \$315 |
|              | Edutainment 16 Upgrade Kit  | \$538 |
|              | Discovery 16 Upgrade Kit    | \$395 |
| Media Vision | Pro Audio Spectrum 16 Basic | \$135 |
|              | Pro Audio Studio 16         | \$215 |
|              | Pro Movie Spectrum          | \$285 |
| Misumi       | 350MS CD-ROM w/ Kit         | \$189 |
| NEC          | CDR-38 Portable CD-ROM      | \$439 |
|              | CDR-84-1 Internal CD-ROM    | \$409 |
|              | CDR-74-1 External CD-ROM    | \$549 |
|              | CD Express Kit w/ CDR-27    | \$309 |
| Sony         | CDU31A Internal CD-ROM      | \$189 |
|              | CDU31A External CD-ROM      | \$239 |
| Texal        | DM-3024 Internal CD-ROM     | \$359 |
|              | DM-5024 External CD-ROM     | \$469 |
| Toshiba      | 3401B 200MS Internal CD-ROM | \$409 |
|              | 3401E 200MS External CD-ROM | \$545 |
| New Media    | Watchit TV                  | \$229 |
| Microsoft    | Windows Sound System        | \$199 |
|              | Video for Windows           | \$139 |
| Panasonic    | CD-ROM w/ Kit               | \$195 |

### CONTROLLERS

|           |                         |              |
|-----------|-------------------------|--------------|
| Always    | IN 2000                 | \$179        |
| Adaptec   | 1522/1522K SCSI         | \$ 79/ \$159 |
|           | 1542C/1542CK SCSI       | \$219/ \$247 |
|           | 1742A/1742AK EISA/SCSI  | \$349/ \$419 |
| Buslogic  | BT445S VLB/SCSI         | \$289        |
|           | BTB747AK EISA/FAST SCSI | \$389        |
| DTC       | 2270VL VLB/IDE          | \$ 95        |
| Orchid    | VLB/IDE                 | \$ 65        |
| Promise   | DC200 IDE CACHE         | \$105        |
|           | DC2040 SCSI CACHE       | \$179        |
|           | DC-4030VL VLB/IDE CACHE | \$145        |
| Trantor   | T338 Parallel/SCSI      | \$105        |
|           | T348 Parallel/SCSI Plus | \$149        |
| Ultrastor | 14F SCSI                | \$189        |
|           | 24F EISA/ SCSI          | \$359        |
|           | 34F VESA/ SCSI          | \$269        |

### SCANNERS

|          |                                   |                 |
|----------|-----------------------------------|-----------------|
| Caera    | Typist Plus Graphics              | \$ 279          |
| HP       | ScanJet IIC                       | \$1395          |
| Logitech | Scanman 32                        | \$ 105          |
|          | Scanman 256 w/ OCR SW             | \$ 219          |
|          | Scanman Color                     | \$ 439          |
| Microtek | Scanmaker II Flatbed Color 600DPI | \$ 849          |
| Tamarack | Color 600/800/1200DPI w/OCR       | \$890/1090/1740 |

### NETWORK

|          |                                  |        |
|----------|----------------------------------|--------|
| 3COM     | 509 Etherlink III TP/ Coax       | \$119  |
| Artisoft | Lantastic V5.0 AE-2 Startkit     | \$459  |
|          | Lantastic ALSW for DOS & Windows | \$ 84  |
|          | Lantastic Noderunner 2000/C,T    | \$169  |
| Intel    | Etherexpress 16 TP/ Coax         | \$105  |
| Novell   | Netware Lite w/ NE2100 Adapter   | \$129  |
|          | Netware 3.11 5 Users             | \$585  |
|          | Netware 3.11 10 Users            | \$1145 |
|          | Netware 3.11 20 Users            | \$1635 |
|          | Netware 3.11 50 Users            | \$2365 |
| SMC      | Elite Plus 16 TP/ Coax           | \$ 97  |
|          | Elite Ultra 16TP/Coax            | \$ 125 |

### PRINTERS

|           |                         |                     |
|-----------|-------------------------|---------------------|
| Citizen   | GSX-230/ GSX-240        | \$249/ \$ 295       |
|           | PN-48                   | \$ 265              |
| Cannon    | BJ-10EX/ BJ-20/BJ-200   | \$269/\$319/ \$ 299 |
| Panasonic | KX-P2180                | \$ 169              |
|           | KX-P2123/ KX-P2124      | \$239/ \$ 319       |
| HP        | Deskjet 500/ 500C/ 550C | CALL                |

### LASER PRINTER

|           |                              |               |
|-----------|------------------------------|---------------|
| HP        | LaserJet 4L/4/4M             | CALL          |
| Okidata   | OL400/OL400E                 | \$529/ \$ 559 |
| Epson     | ActionLaser 1000/1500        | \$669/ \$ 699 |
|           | EPL-8000                     | \$ 899        |
| Microtek  | TrueLaser 6PPM 2 MB 35 Fonts | \$ 999        |
| Panasonic | KX-P4410/ KX-P4430           | \$569/ \$ 689 |

### SOFTWARE

|             |                                     |              |
|-------------|-------------------------------------|--------------|
| Aldus       | Pagemaker for Windows               | \$485        |
| Borland     | Borland C++ 3.1 & Application Frame | \$485        |
|             | Paradox for Windows                 | \$129        |
|             | Dbase IV                            | \$459        |
|             | Quattro for Windows                 | \$150        |
| Corel       | Corel Draw & CD for Windows         | \$365        |
| Lotus       | 1-2-3 for Windows/4.0 Upgrade       | \$299/ \$ 97 |
|             | AmiPro for Windows                  | \$265        |
|             | Freelance for Windows               | \$335        |
| Micrografx  | Picture Publisher                   | \$199        |
|             | Graphics Works                      | \$ 99        |
| Microsoft   | Excel for Windows                   | \$199        |
|             | Office for Windows                  | \$399        |
|             | Word for Windows                    | \$199        |
|             | Windows 3.1 Upgrade                 | \$ 45        |
|             | Workgroup                           | \$ 67        |
| WordPerfect | Wordperfect 5.2 for Windows         | \$275        |
|             | Wordperfect 6.0 Upgrade             | \$105        |

### MODEMS

|             |                                |              |
|-------------|--------------------------------|--------------|
| Hayes       | Acura 14.4 Fax Modem Int       | \$235        |
|             | Acura 14.4 Modem Ext           | \$255        |
| Intel       | 14.4 Fax Modem Int/Ext         | \$189/ \$219 |
| Practical P | PM14.4Fax Modem Int/Ext        | \$209/ \$225 |
|             | PM14.4 Pocket Fax Modem        | \$354        |
| US Robotics | Sporter 14.4 Modem Int         | \$159        |
|             | Sporter 14.4 Fax Modem Int/Ext | \$189/ \$199 |
| Zoom        | 14.4 Modem Int/Modem Fax Int   | \$199/ \$219 |

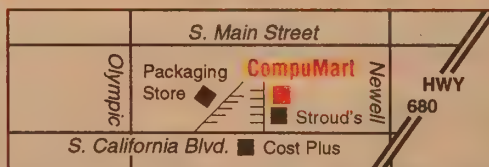
All prices are subject to change without notice.

**(510) 946-1234**

**1320 S. California Blvd., Walnut Creek (Across from Cost Plus, next to Stroud's)**

**Monday-Friday: 9:30-8:00, Saturday: 10:00-7:00, Sunday: 12:00-6:00**

**Over 5,000 Software, Printers, Monitors, CD-ROM, Network Products, Computer Books, Magazines In Stock.**





# BUSINESS SOLUTIONS

## RESOURCES:

**IBM PCMCIA cards**  
IBM Technology Products  
1-800-IBM-0181

**Nokia/AT&T Paradyne PCMCIA Cellular Modems**  
Nokia Mobile Phones  
2300 Tall Pines Dr.  
PO Box 2930  
Largo, FL 34649-2930  
(813)536-5553

**RadioMail Wireless fixed-rate email service**  
Radio Mail  
2600 Campus Dr.  
San Mateo, CA 94403  
(415)286-7800  
Internet: info@radio.mail.net

**Sparcom SmartDock ComStation and Drive 95**  
Sparcom Corp.  
897 N.W. Grant Ave.  
Corvallis, OR 97330  
(503)757-8416

**Xircom Netwave**  
Xircom  
26025 Mureau Rd.  
Calabasas, CA 91302  
1-800-874-7875

machines gets increasingly powerful, we will see a proliferation of similar sub-subnotebooks in this category. Flash RAM and other low-power substitutes for hard disks will also increase battery life and reduce weight. HP is already offering its Omnibook with a Flash RAM option, which dramatically increases usable battery life.

## Docking The HP 95LX

A number of notebook and laptop computers are now coming with docking stations, allowing the user to quickly attach and detach desktop peripherals.

Sparcom has a series of docking stations for the HP 95LX series palmtops. The SmartDock ComStation comes with a built-in 2400 baud fax modem, serial port, parallel port, fax software, email software, file transfer software (runs under Windows or DOS), cables, and other connectivity utilities for \$399.95 retail.

Also from Sparcom is the Drive95, an external 3.5" floppy drive for the HP 95LX. For \$329.95, the unit comes with device drivers, an intelligent cache to minimize power consumption, built-in rechargeable batteries, and up to fifteen hours of continuous operation on a charge. The unit attaches to the 95LX via the serial cable.

## IBM Gets Small and Wireless

IBM Technology Products has announced an infrared wireless PCMCIA adapter and two PCMCIA fax/modem cards. The infrared adapters work with standalone wireless LANs based on the Novell ODI protocol. The adapters communicate at 1Mbit per second (approximately one tenth the speed of Ethernet). The connections use diffuse infrared, which means that they do not have to be in a straight line-of-sight with each other (i.e. they do not have to be aimed directly at each other). According to IBM, 100% coverage can be achieved in rooms measuring up to 30 x 30 feet. The PCMCIA adapter is \$549 and the ISA adapter is \$499. The modem cards include 2400/9600 baud and 14.4/14.4 kbps fax modems, and cost \$299 and \$499, respectively.

## AMD Supports Xircom

Meanwhile, Advanced Micro Devices has announced support for the Xircom Netwave wireless LAN standard based on radio LAN adapters. Netwave allows the formation of peer-to-peer workgroup LANs, and AMD hopes that the promotion of the Xircom standard will allow users to mix and match wireless LAN products much as they can Ethernet and modem products. Other partners include AST Research, Dell, Digital Equipment Corporation, GEC Plessey, NCR, NEC, Norand, Novell, Sun Microsystems, and Telxon.

## PCMCIA Cellular Modem

AT&T Paradyne and Nokia Mobile Phones have announced a PCMCIA Type II modem with a special direct connection interface that allows users to connect the 14.4 kbps modem to a Nokia Mobile Phone. Special error correction designed for cellular use by AT&T Paradyne is built into the modem. The

# SPARC WORKSTATIONS



**SunSelect**  
Registered Reseller



## (Full Configuration)

|                           |         |
|---------------------------|---------|
| 100% Sparc 10 Clone       | \$9,100 |
| 100% Sparc Classic+ Clone | \$3,500 |

- 3 SBuses, Run Solaris 1.1 & 2.x.
- Support SVGA & 1152x900 in One Graphic Card.

**Sparc 10 Clone M41, M51 (Shipping Now)**

**Call Today: 1-800-468-8908**

We also carry LAN related products: Ethernet cards, HUB, and PC-NFS and provide services to help you setup smooth intergration between PC and SUN workstations. Call Accord Systems Today.



**Accord Systems, Inc.**  
548 Valley Way, Milpitas, CA 95035

Tel: (408) 945-9787  
Fax: (408) 945-9849

**Dealer Inquiries Welcome. Gov't & Education Discounts**

# SPARC WORKSTATION

**LOOK & COMPARE YOU'LL SEE WHY,**  
**TODAY MORE USERS CHOOSE SUNAR WORKSTATIONS**



**Introducing NEW SPARC 10 FAMILY**

- SPARC II & II PLUS
- SBUS PERIPHERALS
- MEMORY
- CD-ROM, TAPE AND HARD DRIVES
- SCSI CABLES
- And Much, Much More!

**SUNAR CONTINUES TO OFFER THE BEST SPARC VALUES IN TODAY'S TECHNOLOGY**

See Us At UNIX EXPO - New York Sept. 21-23 Booth #480

**CALL NOW 800-22-SUNAR (U.S. & CANADA)**

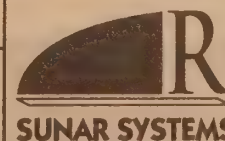
**BUY NOW PAY LATER  
PLAN AVAILABLE**

**RESELLERS  
WELCOME**

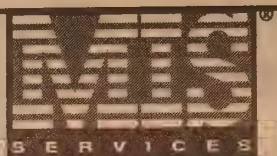
CORPORATE, GOV'T PO'S OK

E MAIL: SUNAR @ NETCOM. COM

3350 SCOTT BLVD.  
BLDG. 1901  
SANTA CLARA, CA 95054  
TEL.  
(408) 982-0288  
FAX  
(408) 982-9369







"Service That's Second to None"

Your Complete Training Center



# TRAINING SCHEDULE



(800) 300-4MIS

## CNE Package #3

- NetWare v3.11 System Manager
- NetWare v3.11 Advance System Manager
- NetWare Service & Support
- Networking Technologies
- NetWare TCP/IP Transport
- NetWare NFS
- NetWare v3.11 to v4.0 Update

**SUMMER SPECIAL**  
\$3,984<sup>50</sup> CNE  
\$1,195<sup>00</sup> CNA

## September

| Mon                                         | Tue                                         | Wed                                         | Thu                                         | Fri                          |
|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|------------------------------|
|                                             |                                             | 1<br>NET TECH                               | 2<br>NET TECH                               | 3<br>NET TECH                |
| 6                                           | 7                                           | 8<br>3.11 TO 4.0 UP                         | 9<br>3.11 TO 4.0 UP                         | 10<br>3.11 TO 4.0 UP         |
| 13<br>CNE<br>Excelsior<br>EVE<br>NOVELL LAB | 14<br>CNE<br>Excelsior<br>EVE<br>NOVELL LAB | 15<br>CNE<br>Excelsior<br>EVE<br>NOVELL LAB | 16<br>CNE<br>Excelsior<br>EVE<br>NOVELL LAB | 17<br>CNE<br>Excelsior       |
| 20<br>UNIX USER 1<br>EVE<br>TCP/IP          | 21<br>UNIX USER 2<br>EVE<br>TCP/IP          | 22<br>UNIX SYSTEM<br>V ADMIN<br>EVE NFS     | 23<br>UNIX SYSTEM<br>V ADMIN<br>EVE NFS     | 24<br>UNIX SYSTEM<br>V ADMIN |
| 27<br>PM 2.2 SYS<br>MGR                     | 28<br>PM 2.2 SYS<br>MGR                     | 29<br>EVE<br>SERV &<br>SUPPORT              | 30<br>EVE<br>SERV &<br>SUPPORT              |                              |

(For Your Convenience, please call for Catalog of Class Information and Descriptions)

## October

| Mon                                    | Tue                                    | Wed                                                  | Thu                                                  | Fri                             |
|----------------------------------------|----------------------------------------|------------------------------------------------------|------------------------------------------------------|---------------------------------|
| 4<br>CNE<br>Excelsior<br>EVE<br>TCP/IP | 5<br>CNE<br>Excelsior<br>EVE<br>TCP/IP | 6<br>CNE<br>Excelsior<br>EVE<br>NFS                  | 7<br>CNE<br>Excelsior<br>EVE<br>NFS                  | 8<br>CNE<br>Excelsior           |
| 11<br>NOVELL LAB                       | 12<br>NOVELL LAB                       | 13<br>PM3.11 ADV<br>(CNE & CNA)<br>EVE<br>NOVELL LAB | 14<br>PM3.11 ADV<br>(CNE & CNA)<br>EVE<br>NOVELL LAB | 15<br>PM3.11 ADV<br>(CNE & CNA) |
| 18<br>OS/2<br>EVE<br>3.11 (CNA)        | 19<br>OS/2<br>EVE<br>3.11 (CNA)        | 20<br>LANSER<br>VER 3.0                              | 21<br>LANSER<br>VER 3.0                              | 22<br>LANSER<br>VER 3.0         |
| 25<br>CNA 3.11                         | 26<br>CNA 3.11                         | 27<br>3.11 TO<br>4.0 UP                              | 28<br>3.11 TO<br>4.0 UP                              | 29<br>3.11 TO<br>4.0 UP         |

TRAINING on 486/50's

Centrally Located at 12th Street/City Center BART Station

MIS Services, Inc. • 436 Fourteenth St., Suite 1030,  
Oakland, CA, 94612 • (510) 208-5700

# BUSINESS SOLUTION

design does not require an external battery, since the mechanism is powered by the mobile phone and the computer's power supply. Price is \$699 for modem and interface (not including the phone).

## Air Mail

Most existing wireless connectivity solutions involve expensive use of cellular voice lines for regular modem link-ups. The disadvantage of this approach is that depending on how you use the network, you might unknowingly rack up very high charges on your cellular telephone bill. What wireless communications needs is a fixed-rate service, so you can communicate without worrying about the cost of every character you send and receive.

RadioMail is such a service. For a flat rate of \$89, you get unlimited two-way electronic mail, with routers to Internet, CompuServe, MCI mail networks, cc:Mail, and ATT Mail. The service uses the Ericsson GE "Mobitex" wireless data network in the US and Canada, with a data transmission speed of 8 kbps, supporting 90% of urban business areas. RadioMail consists of special applications software, and it supports a wide range of cellular data packet modems, such as the \$795 Ericsson/GE Mobidem. The HP 95LX and 100LX are supported, as are Apple PowerBooks, Duos, and any DOS laptop or notebook computer. RadioMail also provides one-way forwarding of messages to a variety of paging devices.

Another wireless messaging service has been announced by Motorola, Inc., called EMBARC. EMBARC (Electronic Mail Broadcast to A Roaming Computer) is a one-way service that allows both one-to-one and one-to-many (broadcast) transmissions. The system utilizes the NewsStream receivers, which use paging technology to receive news and information while on the go. Messages can be up to fifteen hundred characters of text or binary data. In addition to messaging, the service also delivers daily news and weather reports from *USA Today* as well as other information services for the \$15 monthly subscription fee. More extensive news headline service is available via the optional HeadsUp service, which costs \$30/month, and allows users to request the full text of news articles by calling a 1-800 number and punching in the six-digit code. The text can be faxed or sent to their EMBARC mailbox. Supported platforms include the HP 95LX and 100LX, as well as the PowerBook line and DOS portables. Service is available in the United States and Canada.

## The Incredible Shrinking Hard Disk

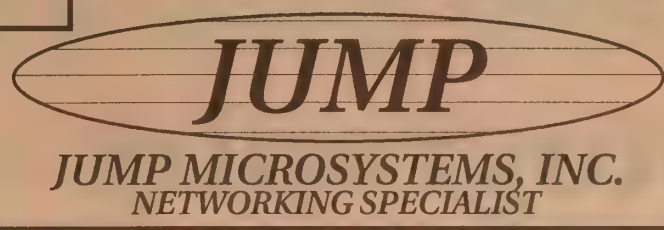
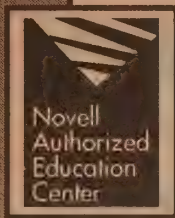
Western Digital has announced its own PCMCIA Type III form factor micro hard disk drive, the Caviar Ultralite CU140, with a 19ms seek time and 1.8" size. The HP Omnibook 300, mentioned earlier, uses this drive as its default (the other option is a Flash RAM drive). The drive provides 42MB of disk storage, but uses a very small amount of power.

## More PCMCIA Cards

DataTrek Corporation has announced its own high-speed PCMCIA fax modem and Ethernet card. The DataTrek ComCard-2 is a 14.4 kbps v.32bis fax modem that lists for \$565.

DataTrek also has announced the NetCard-T and NetCard-2 Ethernet cards, which list for \$345 each. Interestingly, these Ethernet cards are fully NE2000 compatible, meaning that one can use any driver that can be used with the popular Novell NE2000 Ethernet board. This gives the DataTrek Ethernet cards a slight advantage over other cards, since one can almost be assured that drivers will be available even as new versions of operating systems come into being. ■





# WINDOWS NT IS HERE!

Free Technical Support From Enterprise CNE

When You Work With Us!

We Specialize in High-Technology and Office Automation Solutions!

We carry the complete line of networking products from the manufacturers listed below.  
Please call for information on products not listed for pricing and availability of items.

## PRODUCT SPECIALS

Ethernet Cards TE-2000 ..... \$59  
Netware Lite & NE2100 Adapter ... 101

### Lantastic Networking Products

|                                 |          |
|---------------------------------|----------|
| Lantastic AE-2 Adapter Coax     | 215      |
| Lantastic AE-2 Adapter 10BT     | 199      |
| Lantastic for Win v5.0/300 user | 139      |
| Lantastic AI v5.0               | 79       |
| Lantastic AI v5.0 NE2000 comp   | 144/user |

### Microsoft Products

|                                  |        |
|----------------------------------|--------|
| Windows NT v3.1 Single w/doc     | 345    |
| Windows NT v3.1 Single Lic       | 299    |
| Windows NT v3.1 20-user Lic      | 5495   |
| Windows NT v3.1 100-user Lic     | 22,495 |
| Windows NT Server Single User    | 995    |
| Windows NT Server Single Lic     | 855    |
| WorkGroup Starter Kit            | 290    |
| WorkGroup Single User Kit        | 144    |
| WorkGroup Starter Kit w/NIC      | 499    |
| WorkGroup Single User Kit w/NIC  | 245    |
| Workgroup add on Windows 3.1     | 67     |
| Workgroup add on Windows 3.1 Lic | 60     |
| PC Mail & Schedule+ for Windows  | Call   |

### IBM OS/2 Products

|                                     |         |
|-------------------------------------|---------|
| OS/2 v2.1 Single User 3 1/2"/CD-ROM | 59/142  |
| OS/2 LAN Server Entry v3.0 Server   | 559     |
| OS/2 LAN Server Adv. v3.0 Server    | 1539    |
| OS/2 Additional License v2.0        | 10/user |

### Novell Networking Products

|                                     |                 |
|-------------------------------------|-----------------|
| Netware Workstation kit for Windows | 25              |
| Netware Lite v1.1                   | 69              |
| Netware Lite NE2100 comp            | 101/user        |
| Netware Lite NE2000 comp            | 130/user        |
| Netware 3.11(5/10/20)               | 570/1245/1695   |
| Netware 3.11(5/10/100)              | 2435/3390       |
| Netware 4.01(5/10/25)               | 860/1975/2825   |
| Netware 3.11 and 4.0 Upgrades       | Call            |
| Lan Workplace for DOS               | 289             |
| Lan Workplace for OS/2              | 299             |
| Lan Workplace Upgrades              | Call            |
| Netware for Mac 5/20 User           | 345/620         |
| Netware for Mac Upgrades            | Call            |
| Multiprotocol Router v2.0           | 755             |
| Netware Wan Link v2.0 Server        | 1051            |
| Netware Access Server v1.3          | 1755            |
| Netware NACS (2-port, 8-port)       | 429/1275        |
| NACS Upgrades                       | Call            |
| Netware MHS (1/10/50)               | 81/149/350      |
| Netware Global Messaging 20 user    | 353             |
| Netware SFT III v3.11 5 user        | 1895            |
| SFT Upgrades                        | Call            |
| Netware for NFS v1.2 server         | 2995            |
| Lan Workplace for NFS               | 220             |
| Netware Flex/IP v1.2                | 495/per company |
| Netware for SAA/16 & 3.11 runtime   | 895             |
| Netware SNA Links server            | 950             |
| TM3270 for Lan Workplace 10 user    | 550             |
| Netware for SAA Upgrades            | Call            |
| Netware FTAM Server                 | 3995            |
| Lan Analyzer for Windows            | 920             |
| Lan term Network Monitor            | 3500            |
| Synchronous/RS-232+ Adapter         | 910             |
| Synchronous/RS-422+ Adapter         | 925             |
| Synchronous/V.35+ Adapter           | 999             |

### Ethernet Adapter 10BaseT

|                                    |      |
|------------------------------------|------|
| NE-2000 Comp. Ethernet Adapter     | 65   |
| Intel EtherExpress-16TP            | 114  |
| Intel EtherExpress-16TP 5-pack     | 510  |
| Intel EtherExpress-16TP 20-pack    | 1955 |
| SMC WD8013 EtherCard               | 126  |
| SMC WD8013 EtherCard 6-pack        | 680  |
| SMC WD8013 EtherCard 24-pack       | 2420 |
| 3Com 3C509 Etherlink III TP        | 144  |
| 3Com 3C509 Etherlink III 5-pack    | 645  |
| 3Com 3C503-16TP                    | 183  |
| 3Com 3C503-16TP 5-pack             | 791  |
| Xircor Pocket Ethernet III Adapter | 299  |

### Ethernet Adapter, Thin

|                                 |      |
|---------------------------------|------|
| NE-2000 Comp. Ethernet Adapter  | 65   |
| Intel EtherExpress-16           | 114  |
| Intel EtherExpress-16 5-pack    | 510  |
| Intel EtherExpress-16 20-pack   | 1955 |
| SMC WD8013 EtherCard            | 126  |
| SMC WD8013 EtherCard 6-pack     | 680  |
| SMC WD8013 EtherCard 24-pack    | 2420 |
| 3Com 3C509 Etherlink III        | 144  |
| 3Com 3C509 Etherlink III 5-pack | 645  |

|                                     |     |
|-------------------------------------|-----|
| 3Com Etherlink II 3C503-16TP        | 183 |
| 3Com Etherlink II 3C503-16TP 5-pack | 791 |
| Xircor Pocket Ethernet III Adapter  | 299 |

### Ethernet Adapter, Micro Channel

|                                             |      |
|---------------------------------------------|------|
| Intel EtherExpress, MCA                     | 180  |
| Intel EtherExpress TP, MCA                  | 180  |
| Intel TokenExpress type 1, type 3           | 499  |
| Intel TokenExpress type 1, type 3 (10 pack) | 4400 |

### Ethernet Adapter, EISA

|                                |      |
|--------------------------------|------|
| INTEL EtherExpress EISA 32 bit | 445  |
| 3Com 3C579 EISA                | 247  |
| 3Com 3C579 EISA 5-pack         | 1040 |
| 3Com 3C579TP EISA              | 247  |
| 3Com 3C579TP EISA 5-pack       | 1035 |
| Eagle NE3200 EISA 32 bit       | 679  |

### Token Ring Products

|                                   |      |
|-----------------------------------|------|
| Token Ring Adapter 4/16 IBM chip  | 360  |
| Token Ring Adapter 4/16 National  | 328  |
| Token Ring MAU 8 port             | 371  |
| Proteon TR 4/16 Adapter           | 418  |
| Proteon TR 4/16 Adapter 10-pack   | 3990 |
| Proteon UTP MAU, 8 RJ-45          | 639  |
| Madge Smart 16/4 Ringnode         | 611  |
| Madge Smart 16/4 Ringnode 10 pack | 5214 |
| Madge Smart 16/4 EISA Ringnode    | 850  |

### Arclnet Products

|                                           |     |
|-------------------------------------------|-----|
| Thomas-Conrad TC6245 16 bit 2MB buffer    | 199 |
| Thomas-Conrad TC6245-AIO, star/bus/tp/tp+ | 299 |

### Intelligent Serial Cards & IO Port

|                                 |      |
|---------------------------------|------|
| Digiboard 16 port Concentrator  | Call |
| Boca Research Bocaboard 4 port  | 109  |
| Boca Research Bocaboard 8 port  | 159  |
| Boca Research Bocaboard 16 port | 469  |

### Transceivers

|                            |      |
|----------------------------|------|
| Allied Telesis Transceiver | Call |
|----------------------------|------|

### Bridges

|                                      |      |
|--------------------------------------|------|
| 3Com netbuilder local/remote bridges | Call |
|--------------------------------------|------|

### Repeaters

|                     |     |
|---------------------|-----|
| BNC to BNC Repeater | 345 |
|---------------------|-----|

### 10 BaseT Hubs (Repeaters)

|                                      |      |
|--------------------------------------|------|
| 8 Port 10BaseT Ethernet Hub          | 190  |
| 12 Port 10BaseT Ethernet Hub         | 390  |
| Networth Micro Hub, 9 port           | 399  |
| 3Com Linkbuilder 10BaseT Hub 12 port | 425  |
| 3Com Linkbuilder FMS10BT Hub         | 953  |
| 3Com Linkbuilder FMS Coax Hub        | 1620 |
| Asante 10BT Hub 8RJ45 18NC           | 269  |
| Asante 10BT Hub 12RJ45 18NC          | 506  |
| Asante AH1701 SNMP 10BT Hub          | 1020 |
| Microdyme 16 port 10BT Hub           | 659  |
| Microdyme 8 port 10BT Hub            | 350  |

### SNMP Hubs

|                     |      |
|---------------------|------|
| Synoptics SNMP Hubs | Call |
| 3Com SNMP Hubs      | Call |

### Concentrators

|                               |      |
|-------------------------------|------|
| Synoptics Concentrators       | Call |
| 3Com Concentrators            | Call |
| Microdyme Comm/Access Servers | Call |
| Networth Concentrators        | Call |

### Fiber Optics Products

|                               |     |
|-------------------------------|-----|
| TC3045-ST Fiber-optic Adapter | 810 |
|-------------------------------|-----|

### 100 Mbps Lan Products

|                               |      |
|-------------------------------|------|
| TC3045-cx 100Mbps Adapter     | 516  |
| TC3045-ST Fiber-optic Adapter | 810  |
| TC3050 8 Port Hub w/Mngt      | 1273 |

### Server UPS

|                              |         |
|------------------------------|---------|
| APC BACK-UPS 250/450         | 139/209 |
| APC BACK-UPS 600/900         | 285/409 |
| SMART-UPS 400/800            | 335/430 |
| SMART-UPS 900/1250           | 625/835 |
| APC Smart UPS AP900XL        | 1190    |
| AP900XLB extended run module | 346     |
| APC Smart UPS AP2000XL       | 1790    |

### Tape Back Ups

|                             |      |
|-----------------------------|------|
| Colorado Jumbo 120/int      | 160  |
| Colorado Jumbo 250/int      | 225  |
| Colorado Jumbo Trakker 120E | 380  |
| Colorado Jumbo Trakker 250E | 459  |
| Colorado PowerTape 2400 int | 1050 |

|                                     |      |
|-------------------------------------|------|
| Colorado PowerTape 2400 ext         | 1250 |
| Colorado PowerTape 4000 int         | 1660 |
| Colorado PowerTape 4000 ext         | 1869 |
| Archive Turbo Python 1.3-8GB        | 1440 |
| Maystream Int 2GB SCSI bundle       | 1820 |
| Maystream Ext 2GB SCSI bundle       | 1995 |
| Intel Storage Express system server | Call |
| Cheyenne Arcserver backup NLM       | Call |

### Misc. Network Accessories

|                                   |      |
|-----------------------------------|------|
| Ethernet BNC to 10BT converter    | 219  |
| RG-58, RG-62 cables               | Call |
| Level III, Level IV 10BaseT Cable | Call |
| Token-Ring Cables                 | Call |

### Macintosh Networking Products

|                               |     |
|-------------------------------|-----|
| Asante MC-II, 10Mbps Enet     | 157 |
| Asante MC-LCII, 10Mbps Enet   | 225 |
| Asante MC-SE, 10Mbps Enet     | 157 |
| Dayna DL2000 Apple Bus 10Mbps | 250 |

### Fax Servers and Modems

|                                  |      |
|----------------------------------|------|
| Practical 144 Fax MiniTower Mdm  | 265  |
| US Robotics Sportster 96 int     | 147  |
| US Robotics Sportster 96 ext     | 158  |
| US Robotics Sportster 14.4 int   | 167  |
| US Robotics Sportster 14.4 ext   | 185  |
| US Robotics Courier 14.4 Int     | 370  |
| US Robotics Courier 14.4 Ex      | 381  |
| US Robotics Courier Fax Ext      | 391  |
| US Robotics Courier hst-ds ext   | 720  |
| US Robotics Shared mdm kit       | 670  |
| US Robotics Shared commserv      | 1490 |
| Intel Satisfaction Modem/200     | 320  |
| Intel Satisfaction Modem/400     | 430  |
| Intel Net Satisfaction 20-user   | 645  |
| Intel Net Satisfaction 1000-user | 1035 |
| Optus Fax Server (per server)    | 719  |
| Castelle Fax Press               | 2795 |

### Network Print Servers

|                               |     |
|-------------------------------|-----|
| Xircor Pocket print server    | 299 |
| Eagle NPE400 print server     | 360 |
| Intel Netport II print server | 394 |
| Intel Netport Express XL      | 465 |
| Milan 3000 TCP/IP & IPX 1p/1s | 469 |
| Milan 3100 DMA Fast port      | 699 |
| Castelle 1S/1P print server   | 450 |
| Castelle 3S/1P print server   | 510 |
| Castelle 1S/1P print server   | 659 |

### e-Mail and Other Products

|                                                   |             |
|---------------------------------------------------|-------------|
| Da Vinci e-Mail for Dos (10 user)                 | 499         |
| Da Vinci e-Mail for Win (10 user)                 | 799         |
| Da Vinci e-Mail 5 user add-on                     | 249         |
| Da Vinci e-Mail 30 user add-on                    | 1299        |
| Da Vinci e-Mail for OS/2, server                  | 1995        |
| Da Vinci e-Mail Remote for Windows                | 150         |
| Da Vinci e-Mail Remote for Dos                    | 195         |
| Da Vinci SMTP Gateway                             | Call        |
| Network e-Mail for Dos, 5k TSR System Pack /10/50 | 99/399/1499 |
| Network e-Mail for Windows, System Pack /10/50    | 99/599/2299 |
| Network Remote                                    | 149         |

### Notebook Network Connections

|                                |     |
|--------------------------------|-----|
| Xircor Pocket Adapter Enet III | 299 |
| Pocket Adapter Enet 10BT & BNC | 329 |
| Xircor CreditCard Enet Adapter | 290 |
| Xircor External Enet Adapter   | 399 |

### Univel Products

|                             |      |
|-----------------------------|------|
| Unixware P.E.               | 169  |
| Unixware Utilities          | 179  |
| Unixware TCP & NFS Add On   | 229  |
| Unixware Application Server | 895  |
| FrameMaker for Univel (new) | 720  |
| Other Unixware products     | Call |

### SCO Unix

|                                 |      |
|---------------------------------|------|
| Personal System V Release 3.2.4 | 345  |
| Other SCO Unix products         | Call |

### Sunsoft/Interactive/Solaris

|                                  |      |
|----------------------------------|------|
| PCNFS v5.0                       | 415  |
| Solaris/PC v2.1 Desktop, CD, RTU | 538  |
| Solaris/PC v2.1 Workgroup, CD    | 1395 |
| C Compiler for Solaris           | 799  |
| C++ Compiler for Solaris         | 1295 |
| SCSI Controller for Solaris      | Call |
| Network Adapter for PC Solaris   | Call |

### Unix TCP/IP Client software

|                            |          |
|----------------------------|----------|
| ftp PC/TCP for Dos         | 350      |
| ftp PC/TCP for Dos 20 user | 275/user |

### Other Sunsoft Products

|                              |     |
|------------------------------|-----|
| Interactive 4 Multiuser 3.5" | 371 |
| Netware Sunlink 1.0 10 user  | 995 |
| PCNFS v5.0 Media, Doc, RTU   | 395 |

### SCSI CD-ROM for PC Solaris

|                                    |      |
|------------------------------------|------|
| Adaptec 1542C SCSI Controller      | 210  |
| NEC CDR-74e SCSI CD Drive          | 590  |
| NEC CDR-84i SCSI CD Drive          | 465  |
| Sony CDU541i SCSI CD Drive         | 510  |
| Telex DM-5024e SCSI CD Drive       | 499  |
| Toshiba TXM-3401i SCSI CD Drive    | Call |
| Internal Tape Drive for PC Solaris | Call |

### SBT Accounting DataBase

|                               |     |
|-------------------------------|-----|
| SBT Small Business Accounting | 695 |
|-------------------------------|-----|

### SBT Series 7 Accounting System

|                               |         |
|-------------------------------|---------|
| System Manager (Single/Multi) | 145/195 |
| Accounts Receivable           | 295/595 |
| Accounts Payable              | 295/595 |
| Sales Orders                  | 295/595 |
| Purchase Orders               | 295/595 |
| General Ledger                | 295/595 |
| Payroll                       | 295/595 |
| Payroll Tax Subscription      | 145/145 |
| Fixed Assets                  | 295/595 |
| Job Cost                      | 295/595 |
| Manufacturing                 | 295/595 |
| Time Billing                  | 295/595 |
| Property                      | 295/595 |
| Maintenance                   | 295/595 |
| Corporate Contact Manager     | 1395    |

### SBT Professional Series v2.5

|                                      |          |
|--------------------------------------|----------|
| System Manager (runtime/source code) | 895/1295 |
| Accounts Receivable                  | 895/1295 |
| Accounts Payable                     | 895/1295 |
| Sales Orders                         | 895/1295 |
| Purchase Orders                      | 895/1295 |
| General Ledger                       | 895/1295 |
| Inventory Control                    | 895/1295 |
| Sage ReportWriter (Series 7/Pro)     | Call     |

### Medsoft - Medical Software

|                                   |       |
|-----------------------------------|-------|
| Medical Practice Manager          | 3995+ |
| Dental Practice Manager           | 3995+ |
| Practice Manager Anesthesiology   | 4495+ |
| Clinical Information Manager      | 2995  |
| PPM Electronic Claims             | 1049  |
| Safier Electronic Claim (CA only) | 1500+ |
| Time Manager Scheduler            | 595   |
| UB-82 Hospital Insurance Form     | Call  |
| Medical Insurance Form            | Call  |
| CPT Codes, ICD-9 Codes            | Call  |
| Demo Packets available            | 30    |

### Action-Plus

|                                 |     |
|---------------------------------|-----|
| Contact Manager Lite            | 99  |
| Contact Manager                 | 299 |
| Contact Manager Network version | 795 |

### Motherboards

|                         |      |
|-------------------------|------|
| 486DX-66 VESA           | 695  |
| 486DX-66 ISA            | 600  |
| 486DX-50 w/2 VLB        | 560  |
| 486DX-50 ISA            | 530  |
| 486DX-33 ISA 128K cache | 399  |
| IBM 486SLC/50 ISA       | Call |
| IBM 486SLC/66 ISA       | Call |

### HD Drives & Disk Arrays

|                                |      |
|--------------------------------|------|
| Maxtor 7345A 345MB IDE         | 325  |
| Quantum LPS-525 SCSI           | 800  |
| Microplis Disk Array           | Call |
| Storage Dimensions Disk Arrays | Call |

### VGA Cards and Monitors

|                               |      |
|-------------------------------|------|
| CTX 14" SVGA 28mm             | 275  |
| CTX 14" SVGA 28mm NI          | 295  |
| CTX 17" SVGA 28mm 128x1024 NI | Call |
| Diamond Stealth 24/pro/VLB    | Call |
| Orchid ProDesigner IIs        | 140  |
| SVGA/512K/1M                  | Call |

### Special Configured Servers & WSs

|                                |      |
|--------------------------------|------|
| Special Configured Server      | Call |
| Special Configured Workstation | Call |
| Lan Workstation                | 110  |



**43446 South Grimmer Blvd.  
Fremont, CA 94538**

**(510) 440-8006  
Fax (510) 440-0703**

**Hours: M-F 9-6 SAT 11-4  
ATM Pay Point**





**AutoMail**

880 S. Grimmer 680

San Jose



# Photography and the Laptop

*As Laptops Become More Powerful,  
The Range Of Uses Also Increases*

**BY ED  
KAHN**

## RESOURCES:

**FotoMan Plus, \$799**

Logitech Inc.  
6505 Kaiser Dr.  
Fremont, CA 94555  
1-800-231-7717

**A**lthough the promise of good, powerful digital photography has long been on the horizon, Logitech's FotoMan Plus brings it one step closer. It does not deliver 100% of the promise, but does give us the choice of replacing film with computer memory for most of our basic photography needs.

FotoMan Plus connects to the computer through a cable that plugs into the serial port. When it is connected, we can either operate the camera via the computer or simply download images we have already captured with the freestanding digital camera. After the battery is charged, you can disconnect FotoMan Plus from its

power supply and carry it around like any other camera. It can hold up to thirty-two pictures, storing them in memory until you are able to download them onto the computer. To take more photographs you simply erase the memory of the camera.

The camera itself is quite small, weighing under a pound and measuring

approximately 7" x 3.2" x 1.2". A stand is provided to hold the camera when it is charging or talking to the computer. While the camera is a significant improvement over the previous model, it is still quite basic. First, it is still a black-and-white only device, and secondly, there are absolutely no adjustments possible for speed, distance, or exposure. All of this is handled automatically, which means the optimal distance is seven feet. There is an automatic flash built into the camera. While there is no visual indicator to tell you how many shots you have taken or how many are left, it does sound an alert when you are getting near its capacity.

Overall, the camera is basic, but Logitech does provide a filter-shooting outside.

Other filters are available and connect easily through the included adapter ring. Also, although Logitech does not sell other lenses, the camera is designed to accommodate both a wide angle and telephoto lens. These accessory lenses will greatly expand the versatility of the camera.

Battery capacity is enough for the most basic jobs, but then that is really what this

for instance, can take pictures of a house and then incorporate the images into a listing form for printing on a laser printer or inclusion in a publication. Likewise, insurance adjusters and underwriters can obtain quick documentation that can be easily incorporated into forms. One of the real advantages of this technology is that you can easily share the images with other applications on your system or around the world. Modem transmission of these files can be done in seconds. Furthermore, it is simple to work with the pictures on your computer by using the provided software.

When we speak of the FotoMan Plus, it is impossible to talk only of the hardware, for an indispensable part of the package is its FotoTouch and FotoMan software. When you initially load these programs into the computer, certain files are installed in the camera. If you let the battery run completely down, it will be necessary to reinstall the software to the camera.

Once you have the software installed—by the way, this requires Windows—you can download the photo files. Then the fun begins. Because these files are digital, it is easy to manipulate them in ways you cannot easily do with standard photos. Lightening, darkening, showing outlines only, shading, retouching, and many more adjustments are as simple as using a mouse. If you have a scanner, you can also manipulate scanned images using the same software. Logitech allows you to save the image files in formats, such as TIFF or PICS, that will work with most of the application software you are likely to be using. In addition, Logitech has also introduced a new high-compression format that significantly reduces the amount of disk storage space an image requires.

Printing is simple, but the better your printer the better your results will look. FotoMan Plus is designed to utilize the capabilities of the new 600dpi printers. On my 300dpi unit, the results are a far cry from traditional photography.

Logitech has made a contribution that is sure to become increasingly important as technology allows us to print affordable high-definition color in the years to come. If we think of this as a step along the way, it is impressive. If we are fooled into thinking this is the final product, we will be disappointed.

If you are in one of those businesses that can benefit by the advantages this technology offers, it is certainly worth checking out.

**THERE ARE MANY  
APPLICATIONS WHERE THIS  
EQUIPMENT MAKES A LOT  
OF SENSE. REALTORS, FOR  
INSTANCE, CAN TAKE  
PICTURES OF A HOUSE AND  
THEN INCORPORATE THE  
IMAGES INTO A LISTING  
FORM FOR PRINTING ON A  
LASER PRINTER OR  
INCLUSION IN A  
PUBLICATION.**

camera was designed for. Each day off the charger will deplete the battery by about 15% regardless of whether there is any use or not. Taking thirty-two pictures will deplete the camera by about 20%. As you can tell, this camera is not designed to store pictures for a long time. Rather, it is good for taking pictures and promptly downloading them.

There are many applications where this equipment makes a lot of sense. Realtors,

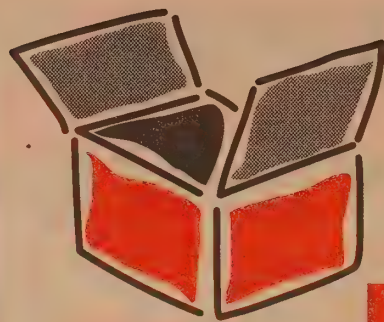
*continued on page 288*







INVENTORY  
CLEARANCE  
SALE



San Francisco  
Only

Returned,  
Opened,  
Demo, New  
Items

DESCRIPTION

COMPUTERS/NOTEBOOKS

| DESCRIPTION                          | REGULAR | SALE       | STATUS |
|--------------------------------------|---------|------------|--------|
| HP Vectra 4DX2/66 240 MB HD          | \$ 3299 | \$ 2499.99 | D      |
| IBM PS/2 486/33 120 XGA              | \$ 2199 | \$ 1899.99 | N      |
| AST Premium Exec 123V Notebook       | \$ 1799 | \$ 1099.99 | O      |
| AST Premium Exec 83V Color Note book | \$ 2150 | \$ 1395.99 | O      |
| Apple Macintosh LCIII 4/160 MB       | \$ 1379 | \$ 1329.99 | N      |
| Apple Macintosh LCIII 4/80 MB        | \$ 1229 | \$ 1179.99 | N      |
| 286 Desktop Computer 1MB/5.25" FD    | \$ 599  | \$ 299.99  | R      |

PRINTERS

|                                     |        |           |   |
|-------------------------------------|--------|-----------|---|
| HP DeskWriter printer for Macintosh | \$ 350 | \$ 279.99 | N |
| Okidata 321 printer                 | \$ 489 | \$ 399.99 | N |
| Epson 2550 Printer                  | \$ 999 | \$ 399.99 | R |
| Toshiba P341e                       | \$ 599 | \$ 249.99 | R |
| Toshiba P351 SX                     | \$ 599 | \$ 249.99 | R |
| Epson LX 810                        | \$ 189 | \$ 129.99 | D |

MONITORS

|                                  |         |            |   |
|----------------------------------|---------|------------|---|
| SONY GDM-1936 Color Monitor      | \$ 1999 | \$ 1699.99 | D |
| Nanao 9070U Monitor              | \$ 1095 | \$ 655.99  | N |
| HP D1195A Super Ergo VGA monitor | \$ 525  | \$ 449.99  | N |
| HP D1193A 17" Ultra VGA monitor  | \$ 1268 | \$ 999.99  | N |

MODEMS

|                                |        |           |   |
|--------------------------------|--------|-----------|---|
| Megahertz Notebook modem T324M | \$ 255 | \$ 69.99  | R |
| Megahertz Notebook modem TX324 | \$ 255 | \$ 44.99  | R |
| NEC Ultralite 42/96 modem      | \$ 450 | \$ 129.99 | N |

MISCELLANEOUS

|                                           |        |           |   |
|-------------------------------------------|--------|-----------|---|
| PeachTree Accounting Software             | \$ 159 | \$ 34.99  | O |
| Claris MACDraw II Software                | \$ 199 | \$ 54.99  | O |
| Creative Labs Int. Multimedia Upgrade Kit | \$ 579 | \$ 399.99 | O |
| Creative Labs Ext. Multimedia Upgrade Kit | \$ 679 | \$ 499.99 | O |
| Logitech Mouse & MS Windows               | \$ 149 | \$ 89.99  | O |

DEMO!  
Texas Instruments  
486 SX/25 4/120  
\$1800.99  
Regular \$2000

NEW!  
Apple Macintosh  
LCII 4/80  
\$799.99  
Regular \$999

NEW!  
Apple Macintosh  
LCII 4/40  
\$699.99  
Regular \$899

NEW!  
Apple Macintosh  
LCII 4/80  
\$1159.99  
Regular \$2000

NEW!  
Apple Macintosh  
Power Book 160 4/120  
\$1849.99  
Regular \$2000

DEMO!  
Compaq 486 Model 133  
4/120 4/1000MB  
\$1199.99  
Regular \$1500

NEW!  
166SX 25  
2 MB/40MB HD  
\$599.99  
Regular \$799

NEW!  
Avanti 486  
NEC 13" SCREEN  
\$299.99  
Regular \$99

DEMO!  
Avanti 486 Model 60  
\$1799.99  
Regular \$2000

NEW!  
Avanti 486 Model 120  
\$1949.99  
Regular \$2299

NEW!  
Compaq Mouse  
\$9.99  
Regular \$55

Computown

San Francisco

RETAIL SALES ONLY

756 Market Street

Mon-Fri 9-7, Sat & Sun 10-4

Tel (415) 956 8696

Fax (415) 956 5548

- All Sales Final.
- Prices Reflect Cash Only.
- Limited To Stocks In Hand Only.
- Computown is not responsible for any typographical error.
- All trademarks are registered trademarks of their respective companies.
- Defective merchandise are returnable within 7 days with proof of purchase.
- What You See Is What You Get.
- All products are sold as they are

SF Store  
OPEN  
7 DAYS



# The Most SELECTIONS



## IBM® ThinkPad™ 700c

*Quality & Reliability*

- 486SLC / 25 MHz
- 4 MB RAM
- 120 MB HD
- 10.5" Color TFT LCD screen

**ON DEMO**



## TOSHIBA

### Satellite T1900/1900C

- i486SXA / 20 MHz
- 4 MB RAM
- 120/200 MB HD
- DOS® and Windows® pre-installed, trackball

**IN STOCK**



## NEC

### NEC UltraLite® VERSA™

- i486SL / 25 or 33 MHz
- 4 MB RAM up to 12 MB
- 120 MB, 180 MB HD
- Active Color and Mono models available

**IN STOCK**



## PowerExec™ 4/25 SL

- Intel 486 SL Processor
- 4 MB RAM
- 80/120 /200 MB HD

**CALL**



## COMPAQ

### Compaq Contura 425

- 486SL / 25 MHz
- Available in Mono, Passive & Active Color

**CALL**



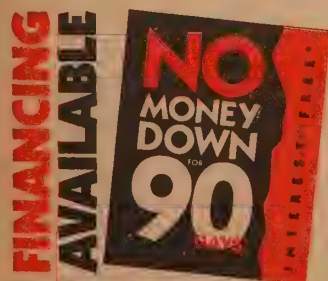
## TEXAS INSTRUMENTS

### TravelMate 4000E WinDX2/50

- 486DX2 / 50 MHz
- 4 MB RAM / 200 MB HD
- Active color screen
- Windows®, Trackball, Software Bundle

**IN STOCK**

Reflects cash prices only. Computown is not responsible for typographical error. Specifications are subject to change without notice. AST, AST logo, PowerExec, Easy Port, Smart Port are registered trademarks of AST Research, Inc. NEC and UltraLite, UltraLite Versa are registered trademarks of NEC Corporation. IBM is a registered trademark and PS ValuePoint and ThinkPad are trademarks of International Business Machines Corporation. All other marks are trademarks or registered trademarks of the products with which the marks are associated.



Please Call Store For More Details

### Mountain View

2444-A Old Middlefield Way

Mon-Fri 8-6, Sat 11-4

Tel (415) 962 8696

Fax (415) 969 8696

### Pleasant Hill

1525 Contra Costa Blvd.

Mon-Fri 9-6, Sat 10-4

Tel (510) 682 8696

Fax (510) 689 8696

### San Jose

780 Montague Expressway

Mon-Fri 8-6, Sat 11-4

Tel (408) 275 8696

Fax (408) 297 8696

**CALL FOR EXPORT INQUIRIES**

**Computown's World of Notebooks**



# Apple® Hot Rebate Promotions

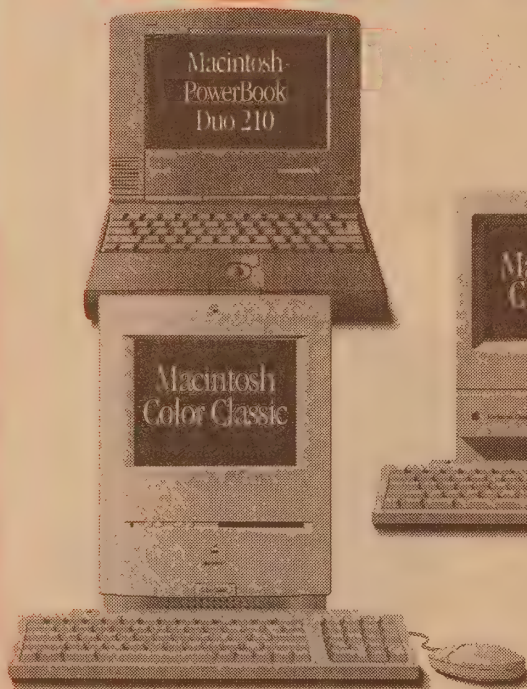
## Hot REBATE!

Now through Sept. 30th, 1993, you may receive a rebate on-the-spot when you purchase selective Apple® printers, monitors, CPUs or even a total selective hardware solution. Please call for more details

On-the-spot  
rebates.  
On-target  
solutions.

Apple® Macintosh® PowerBook Duo™ 210 computer. The best of both worlds.

**\$100**



Apple® Macintosh® Color Classic® computer. The complete color package.

**\$50**

Apple® Macintosh® Classic® computer. Performance and price in one complete package.

**\$50**



Apple® Macintosh Centris™ 610 computer. Exceptional processing power at an affordable price.

**\$150**

Apple® Macintosh Centris™ 610 with CD

**\$300**

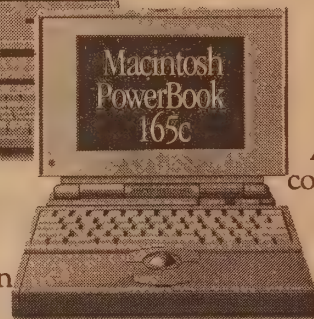


Apple® Macintosh® IIvx computer. Available with a built-in CD-ROM drive.

**\$150**

Apple® Macintosh® IIvx with CD

**\$300**



Apple® Macintosh® PowerBook™ 165c computer. Color and power in a notebook computer.

**\$50**

Apple® Color OneScanner™  
The colorful, easy-to-use scanning solution.

**\$100**

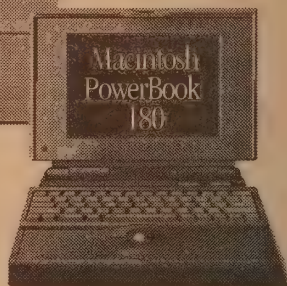
Apple® LaserWriter® Pro 600  
The perfect choice for high-performance printing.

**\$100**



Apple® Macintosh® PowerBook™ 180 computer. The most powerful PowerBook.

**\$100**



Authorized Dealer

Computown is not responsible for typographical errors. Specifications are subject to change without notice. Apple, the Apple logo are registered trademarks of Apple Computer, Inc. Classic is a registered trademark licensed to Apple Computer, Inc. PowerBook, Macintosh Quadra, Macintosh Centris and PowerBook Duo are registered trademarks of Apple Computer, Inc. Trinitron is a registered trademark of Sony Corporation.

**Computown**

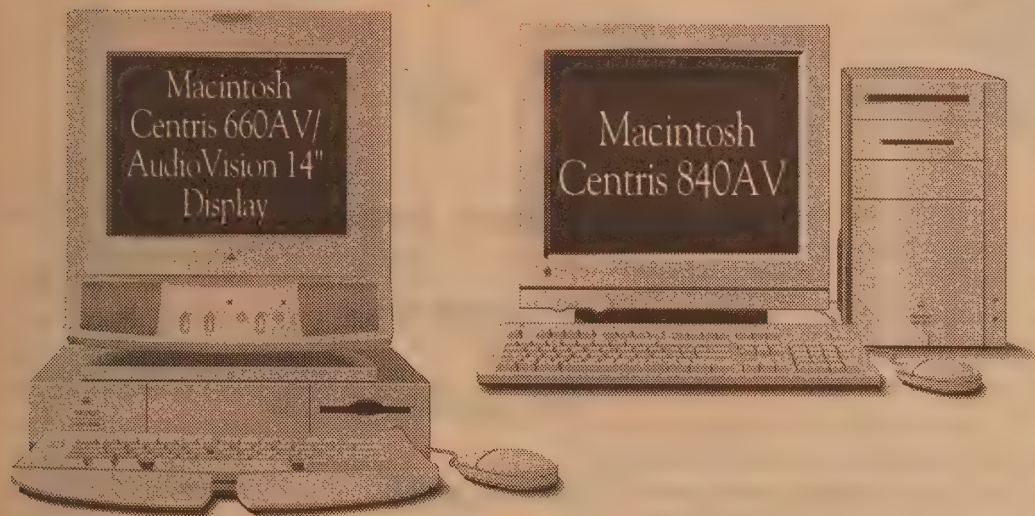
**San Francisco**  
**CORPORATE SALES**  
760 Market Street  
2nd Floor  
Mon-Fri 8-6, Sat 10-4  
**Tel (415) 956 1777**  
**Fax (415) 989 8696**

**San Francisco**  
**RETAIL SALES**  
756 Market Street  
Mon-Fri 9-7  
Sat & Sun 10-4  
**Tel (415) 956 8696**  
**Fax (415) 956 5548**

**Mountain View**  
2444-A Old Middlefield Way  
Mon-Fri 8-6, Sat 11-4  
**Tel (415) 962 8696**  
**Fax (415) 969 8696**



# NEW! *Macintosh*®



**“Hi”**  
I can talk!

Apple® Macintosh Centris

**660 AV**  
**840 AV**

**ON  
DEMO**

**IN  
STOCK**

## Apple® Macintosh Centris™ 660AV

- Motorola 68040, running at 25 MHz
- 55MHz 3210 digital signal processor
- Works with all Apple monitors as well as NTSC, PAL, VGA, and Super VGA displays
- 8 MB RAM, 1 MB VRAM standard
- 80 MB, 230 MB and 500 MB HD available

## Apple® Macintosh Centris™ 840AV

- Motorola 68040, running at 40 MHz
- 66MHz 3210 digital signal processor
- Works with all Apple monitors as well as NTSC, PAL, VGA, and Super VGA displays
- Comes with 8 MB or 16 MB RAM
- 230 MB, 500 MB, and 1 GB HD option

## Apple® AudioVision™ 14 Display

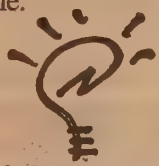
- 14" screen, 640 x 480 at 70 dots per inch
- Features stereo speakers for CD quality sound output
- Tilt-and-swivel base for adjustment to comfortable viewing, speaking and listening angles
- Front panel buttons for easy access for brightness, contrast, volume, mute and microphone controls

# NEWTON™ *MessagePad*®

"The Macintosh® was a revolution for the desktop.  
The Newton™ is a revolution for the pocket."  
- Apple's John Sculley

## Apple® Newton® MessagePad™

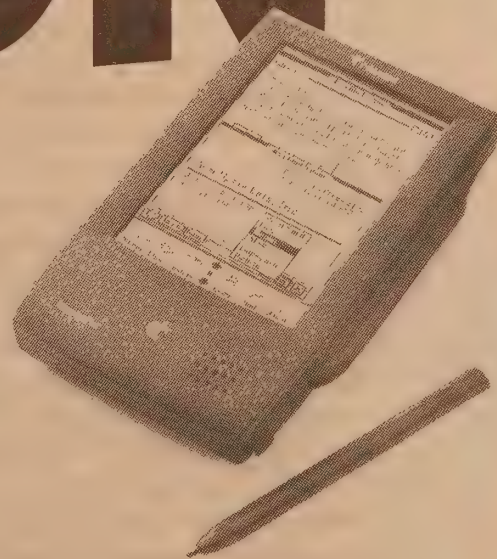
The Newton MessagePad is the first in a family of communications assistants from Apple. You can sketch. You can take notes. Make a quick sketch. Send a fax. Receive pages and messages. Tap into on-line services and much more.



Newton

**ON  
DEMO**

**NOW  
TAKING  
ORDERS.**



Apple, the Apple logo, Newton, the Newton logo are registered trademarks of Apple Computer, Inc. Macintosh Quadra, Macintosh Centris are registered trademarks of Apple Computer, Inc. Kodak and Photo CD are trademarks of Eastman Kodak Company. PowerCD is a trademark of ZCI, Inc., Dallas, Texas. Trinitron is a registered trademark of Sony Corporation. Computown is not responsible for typographical errors. Specifications are subject to change without notice. Financing available on approved credit. Please call store for more details.

## Pleasant Hill

1525 Contra Costa Blvd.  
Mon-Fri 9-6, Sat 10-4  
**Tel (510) 682 8696**  
**Fax (510) 689 8696**

## San Jose

780 Montague Expressway/O'Toole  
Mon-Fri 8-6, Sat 11-4  
**Tel (408) 275 8696**  
**Fax (408) 297 8696**

**CALL FOR EXPORT INQUIRIES**

  
**Computown**

**Apple's® Hot New Products**



# The (Unbearable) Detrivialization Of Ping

BY BENNETT  
FALK

**I**s this how the passage of time is supposed to work? Do things really become less silly as time goes on? Perhaps this is "maturity": a fine, healthy thing, I'm sure, but only in moderation. What is death, after all, but excessive maturation?

The odd thing is the way we inflict the passage of time on software. Software doesn't usually age by itself. Instead we write new versions of old programs to simulate what the old programs would have grown up to become.

Take, for example, the fate of ping.

You probably remember the old ping. In fact you may still be using it. Ping started out as a bright, reassuring, Fisher-Price sort of command. All you had to do was type "ping" followed by the name of some

computer on your network and most of the time you would get back a comforting message:

% ping elvis elvis is alive.

The psychological effects of ping depend a lot on what you name your computers. If your network has machines named "chthulu" or "beelzebub," the old ping might not be so calming.

No matter. The psychological part was just a side effect anyway. The true purpose of ping is to tell you something about the network your computer is on. It's a utility that is generally available on systems that use the TCP/IP network protocol. Consequently you'll find it on most UNIX systems that participate in networks and on many PCs that use TCP/IP.

What ping does is send an echo request to the computer you name. If there's a way for things to move over the network from your computer to that one, if that one happens to be up, and if its network stuff all works, ping will get a response and tell you that the remote computer is alive.

There are not a lot of ways for ping to go wrong. If it is unable to interpret the host name you provided for it, it returns an

"unknown host" error. If the echo request packet is undeliverable, it can return a "host unreachable" error. Or if the target computer is actually down, ping might report "No answer from..."

The point is that ping is not very complicated. It has a well-defined purpose, nothing very arduous to do, and fairly well defined conditions of failure. Apparently, however, it also has a fate.

You begin to sense this in completely superficial ways. For example, if you sit down at any arbitrary UNIX system and type "ping al Bundy" you will probably get a "ping: Command not found" message because the directory in which ping is installed is not in the list of directories that is searched for commands. Well, ping is an administrative command and it's probably wise to put it in an out-of-the-way directory.

Unfortunately, there's no consensus among UNIX vendors about which out-of-the-way directory should contain ping.

On some systems (IBM, HP, and Interactive) it will be found in /etc. On others (Sequent, Silicon Graphics, and Sun) ping resides in /usr/etc. SCO installs it in /usr/bin, and Sun's new Solaris operating system stores ping in /usr/sbin. The lack of consensus over where ping should be installed is vaguely disturbing: Why should there not be universal agreement about something so easy to use?

Fortunately on most systems, the articles in the online manual provide a full pathname for the commands they discuss. Consequently you should be able to find the directory that contains ping by reading its manual page. But if you look at the online documentation for ping on several different systems, you'll begin to notice that

**The true purpose of ping is to tell you something about the network your computer is on.**

there is more than one ping.

The manual article for Sun's version of ping is only a few lines past one page in length, and doesn't read like anything special. The Silicon Graphics article on ping, however, is four fairly dense pages that go into considerable detail describing what ping does and what the fate of packets traveling across the net ought to be. (In fact, it's a very neat manual page for anyone who's trying to come to terms with what networks really do.)

The SGI article also voices a warning worthy of the Surgeon General: ping should be used only for network testing and

fault isolation: "Because of the load it can impose on the network, it is unwise to use ping during normal operations or from automated scripts." The ping manual pages from several other vendors echo this warning. If all you know is the old ping, this is very unsettling. How much of a network load can it be to tap Elvis on the shoulder and ask if he's alive?

Perhaps it's time to run the ping command on several systems to see what happens. On Sun systems, both SunOS 4.x and Solaris, ping really is as trivial as the example above:

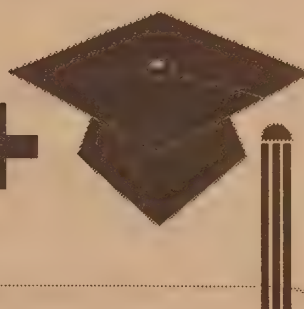
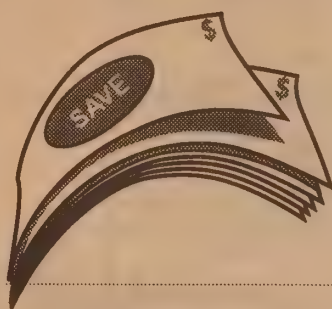
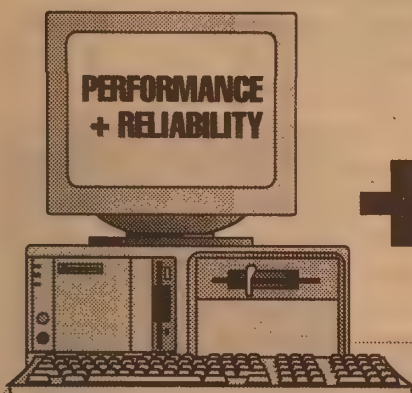
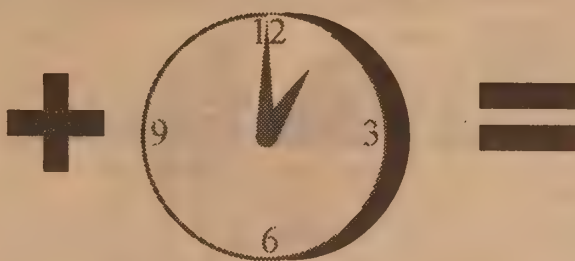
Sun-% /usr/etc/ping al Bundy al Bundy is alive

No network information is reported, and Sun's version of ping exits as soon as it has

UNIX



**Libre**  
Service Computer Inc.



## NEW SERVICE PROGRAMS & UPGRADE SPECIAL

- On-site Warranty
- Repair & Upgrade Service
- Used Computer Trade-In Program
- Network Consultation & Installation
- We Buy/Sell Used Monitors, Please Call.
- Special Sale:  
Upgrade Your 286 to 386/40DX  
128K Cache w/4MB for \$280.00  
Labor Included.

### Local BUS System Kit

486DX-33Mhz 128K Cache;  
VESA Standard 4 MB;  
Mini-tower;  
IDE 2S, 1P, 1G;  
1.2 & 1.44 floppy drives;  
170 MB HD;  
Local BUS video card;  
14" SVGA monitor;  
101 KB; Upgrade to  
486DX2-66 Mhz

**Monthly  
Sale**

**\$1,149    \$1399**

### MIPS 19.3

486-SLC 2-66 Mhz  
16k internal cache CPU;  
On board math co-processor;  
2 Local bus VESA Slot;  
4 MB; Mini tower;  
VLIDE 2S, 1P, 1G;  
1.2 & 1.44 floppy drives;  
170 MB hard drives;  
Local bus video card / 1 MB;  
14" SVGA monitor 0.28;  
101 keyboard.  
3 yrs warranty on system board

**\$1,349**

### Libre External Parallel Line

• Portable Easy Floppy - No internal card; no jumper; attach to parallel print port; extra printer port included; 360K/1.2MB or 720K/1.44MB ..... **\$169**

• Mobile Disk - Quick & easy way to add storage capacity & back-up; also good for data security

120 MB ..... **\$399**  
200 MB ..... **\$499**  
340 MB ..... **\$599**

### Motherboard with CPU

386SX-33Mhz ..... \$80  
386DX-40Mhz 128K ..... \$130  
486DX-33Mhz 128K ..... \$380  
486DX-40Mhz 256K ..... \$430  
486DX-50Mhz 128K ..... \$540  
486DX-33VL 128K ..... \$390  
486SLC2-66VL 128K ..... \$390

386/486 128k cache upgradable motherboard w/o CPU ..... \$90

### HD & Floppy Drives

40 MB HD (IDE) ..... \$120  
120 MB HD (IDE) ..... \$180  
170 MB HD (IDE) ..... \$220  
250 MB HD (IDE) ..... \$260  
340 MB HD (IDE) ..... \$330  
1.2 MB floppy drive ..... \$48  
1.44 MB floppy drive ..... \$42

### System Kits

With: 1MB; IDE HD/FD controller; 2 serial, 1 parallel and 1 game ports; 1.2 or 1.44 floppy drive; 101 KB; mini-tower or desktop case with power supply.

386SX-33Mhz ..... \$260  
386DX-40Mhz 128K .. \$300  
486DX-33Mhz 128K .. \$560  
486DX-40Mhz 256K .. \$600  
486DX-50Mhz 128K ... \$720  
486DX2-66Mhz 128K • \$800

### Video Options:

Mono graphic card ..... \$15  
SVGA card (1280X1024) ... \$50  
Window Accelerator Card .. \$55  
SVGA VL /1MB ..... \$90  
SVGA monitor .39mm ..... \$215  
SVGA monitor .28mm ..... \$250  
SVGA monitor non-int .... \$270  
15" SVGA .28mm ..... \$395  
15" SVGA MP Control ... \$435

### 486DX33 Multi-media System

4 MB; Medium Tower; 1.2 & 1.44 FD; 2S, 1P, 1G Port; 170 MB HD; SVGA Card(1MB); 14" SVGA monitor 0.28; 101 KB; CD Rom; Sound Commander; & Speaker ..... **\$1,399**

### Multi-media Kits

Mitsumi CD Rom ..... \$185  
Mitsumi CD Rom+ 4 Titles  
+ SoundCommander ..... \$320

### Others

IDE controller w/ IO ..... \$15  
VLIDE-I/O ..... \$39  
Serial mouse ..... \$12  
2400 baud modem ..... \$30  
2400/9600 S/R Fax modem • \$50  
101 keyboard ..... \$20  
Mini-tower case ..... \$55  
Medium tower case ..... \$75  
Panasonic KXP1124i prntr • \$299  
250MB tape back up ..... \$185  
Sound Commander Pro ... \$99

**FREMONT**  
48860 Millmont Drive, 102C  
Fremont, CA 94538  
**510-438-0402**  
Fax: 510-438-0489  
Tue-Sat 10 am to 6 pm

**CAPITOLA**  
1220 41st Avenue, Unit G  
Capitola, CA 95010  
**408-479-7319**  
Fax: 408-479-4316

**SAN FRANCISCO**  
(NEW LOCATION)  
1569 Sloat Blvd. Suite 300  
(Second Floor of Crown Book)  
San Francisco, CA 94132  
**415-731-8966**  
Fax: 731-8967  
Tue-Sun 10 am to 6 pm

**SACRAMENTO**  
5112 Madison Ave.  
Sacramento, CA 95841  
**916-349-8200**  
Fax: 916-349-8299  
Tue-Sat 10 am to 6 pm

**No Down  
Financing  
Available**

• Apply for the  
Libre-Credit Card  
(with no application fee)

Advertised prices based  
on 3% cash purchase  
discount.  
Price subject to change  
without notice.  
Check for our everyday  
low price and other new  
products.



# BUSINESS SOLUTIONS

**BEST MEMORY PRICES • HIGHER QUALITY  
• SAME DAY SHIPPING • FREE REPLACEMENT WARRANTY**

| SIMM'S                                             |                |
|----------------------------------------------------|----------------|
| 1x9-10 9 Chip                                      | \$39           |
| 1x9-80 3/9 Chip                                    | 42/55          |
| 1x9-70 3/9 Chip                                    | 45/55          |
| 1x9-60 3/9 Chip                                    | 46/60          |
| 1x8-80 8/2 Chip                                    | 39/49          |
| 1x8-70/2 Chip                                      | 45/55          |
| 1x8-70                                             | CALL           |
| 1x8-60                                             | 59             |
| 4x9-60                                             | 149            |
| 4x9-70                                             | 142            |
| 4x9-80                                             | 139            |
| 4x8-70 8 Chip                                      | 138            |
| 4x8-80 8 Chip                                      | 128            |
| 256x9-80                                           | 12             |
| 256x9-70                                           | 13             |
| DRAM'S                                             |                |
| 1x1-80                                             | \$5.99         |
| 1x1-70                                             | 5.99           |
| 1x1-60                                             | 5.99           |
| 256x4-80                                           | 4.99           |
| 256x4-70                                           | 4.99           |
| 256x4-60                                           | 4.99           |
| 256x1-15-12-10                                     | 1.55/1.60/1.75 |
| 256x70                                             | 1.80           |
| 4464-80                                            | 1.99           |
| 4464-10                                            | 1.89           |
| CPU CHIPS                                          |                |
| 80386DX-                                           |                |
| 16/20/25/33                                        | \$29/39/49/69  |
| 80486DX-2-50/66                                    | 339/459        |
| 80486DX-25/33                                      | 219/269        |
| 80486SX33/25                                       | 159/89         |
| 80386DX40                                          | 49             |
| 386DX40 w/Socket                                   | 45             |
| 80286-8/10 (PLCC)                                  | 4/8            |
| 80286-12/16 (PLCC)                                 | 6/9            |
| V-30-10 V-30/20-10                                 | 9.59           |
| SPECIAL MATH CO-PROC                               |                |
| INTEL 80387DX-20 Tube                              | \$30           |
| MATH CO-PROCESSOR                                  |                |
| INTEL                                              |                |
| 80487SX (For all Speed)                            | \$349          |
| 80486SX-2 (Overdrive)                              | 299            |
| 80486SX-25                                         | 429            |
| 80486SX-33                                         | 559            |
| 80486DX-25                                         | 449            |
| 80486DX-33                                         | 569            |
| 8087-5 MHz                                         | 19             |
| 8087-2 8 MHz                                       | 79             |
| 8087-1 10 MHz                                      | 110            |
| 80287-6 6 MHz                                      | 20             |
| 80287-8 8 MHz                                      | 39             |
| 80287XL 12 MHz (Laptop)                            | 69             |
| 80287-10 10 MHz                                    | 35             |
| 80287-12 MHz                                       | 35             |
| 80387SX-16, 20, 25                                 | 79             |
| 80387DX-16, 20, 25, 33                             | 79             |
| 80387DX-25 (Tube)                                  | 39             |
| WEITEK                                             |                |
| 3167-20 20 MHz (Tube)                              | \$29           |
| 3167-25 25 MHz                                     | 79             |
| 3167-33 33 MHz                                     | 169            |
| 4167-25 MHz                                        | 299            |
| 4167-33 MHz                                        | 529            |
| CYRIX                                              |                |
| 83D87-40 40 MHz                                    | \$59           |
| 83D87-20 20 MHz                                    | 49             |
| 83D87-25 25 MHz                                    | 59             |
| 83D87-33 33 MHz                                    | 59             |
| 83SX87-25 16 MHz                                   | 55             |
| 83SX87-33 MHz                                      | 59             |
| IIT                                                |                |
| 8C87-8                                             | \$29           |
| 80C287-10                                          | 39             |
| 80C387SX-25                                        | 49             |
| 80C387SX-33                                        | 69             |
| 8C387DX-20                                         | 59             |
| 8C387DX-25                                         | 59             |
| 8C387DX-33                                         | 69             |
| 8C387DX-40                                         | 69             |
| ULSI                                               |                |
| US 83C87 16/20 MHz SX                              | \$49           |
| US 83C87 20/25 MHz SX                              | 59             |
| US 83C87 25/33 MHz DX                              | 59             |
| US 83C87 40 MHz DX                                 | 59             |
| EPROMS                                             |                |
| 2764-200ns                                         | \$2.95         |
| 27C64-200ns                                        | 2.99           |
| 27128-200ns                                        | 3.00           |
| 27128-150ns                                        | 4.00           |
| 27256-200ns                                        | 3.30           |
| 27C256-200ns                                       | 3.75           |
| 27C512-200ns                                       | 3.99           |
| 27C020-150ns                                       | 7.99           |
| 27C010-150ns                                       | 5.99           |
| 27C040-150ns                                       | 13.99          |
| 514402-80 (1x4) STT, ZIPP                          | 22             |
| 514400-80 (1x4) ZIPP                               | 20             |
| 514400-80 (1x4) DIPP                               | 22             |
| 514400-80 (1x4) SOJ                                | 17             |
| 514100-80 (4x1) SOJ                                | 16             |
| COMPAQ MEMORY                                      |                |
| DeskPro 386/20e, 20, 35e, 25 286e                  |                |
| 1 MB Module                                        | \$175          |
| 4 MB Module                                        | 165            |
| DeskPro 386/20e, 25e                               |                |
| 1-9 MB Exp Brd                                     | 140            |
| 4-12 MB Exp Brd                                    | 269            |
| DeskPro 386s-16                                    |                |
| 1 MB Module                                        | 89             |
| 4 MB Module                                        | 179            |
| 1-9 MB Exp Brd                                     | 159            |
| 4-12 MB Exp Brd                                    | 240            |
| DeskPro 286N, 386N, 386SX/20                       |                |
| 2 MB Module                                        | 75             |
| 4 MB Module                                        | 175            |
| DeskPro 386N, 386SX/20                             |                |
| 2 MB Module                                        | 118            |
| DeskPro 286N, 386N                                 |                |
| 0-4 MB Exp Board                                   | 175            |
| DeskPro 386/33SL, 486/25, 486/33L                  |                |
| System Pro                                         |                |
| 2 MB Module                                        | 139            |
| 8 MB Module                                        | 239            |
| 32 MB Module                                       | 1700           |
| DeskPro 386/16                                     |                |
| 1 MB Kit                                           | 89             |
| 1 MB Exp Brd                                       | 229            |
| 2 MB Exp Brd                                       | 329            |
| 4 MB Kit                                           | CALL           |
| 4 MB Exp Brd                                       | 425            |
| 8 MB Exp Brd                                       | 725            |
| Portable 386                                       |                |
| 1 MB Kit                                           | 189            |
| 4 MB Exp Brd                                       | 319            |
| 4 MB Exp Brd                                       | 322            |
| Portable LTE (8086)                                |                |
| 512K Module                                        | CALL           |
| Portable LTE/286                                   |                |
| 1 MB Module                                        | 89             |
| 2 MB Module                                        | 149            |
| 4 MB Module                                        | 425            |
| Portable SLT/286                                   |                |
| 1 MB Module                                        | 169            |
| 4 MB Module                                        | 349            |
| Portable SLT/386                                   |                |
| 1 MB Module                                        | 169            |
| 2 MB Module                                        | 189            |
| 4 MB Module                                        | 310            |
| Portable III                                       |                |
| 512K Kit                                           | 55             |
| 2 MB Kit                                           | 139            |
| IBM PS/2 MEMORY                                    |                |
| Mdl 30/386, Exp Brd                                |                |
| 512K Kit                                           | \$54           |
| 2 MB Kit                                           | 89             |
| Mdl 70-061, -121, 55SX, 65SX, Exp Brd              |                |
| 1 MB Module                                        | 69             |
| Mdls 70-061, E61, 121, 50Z, 55LS, 55SX, 65SX, P70: |                |
| 2 MB Module                                        | 85             |
| Mdls 70-A21: A61, B21, B61                         |                |
| 2 MB Module                                        | 99             |
| Mdls 55SX, 65SX, 55LS, 65LS                        |                |
| 4 MB Module                                        | 159            |
| Mdls 80-111, 121, 311, 321                         |                |
| 2 MB Card                                          | 99             |
| Mdls 80-A21: A31                                   |                |
| 4 MB Card                                          | 215            |
| Mdls 80-A21: A31                                   |                |
| 4 MB Card                                          | 215            |
| Mdls 90, 95                                        |                |
| 2 MB Module                                        | 159            |
| 4 MB Module                                        | 259            |
| Mdls 50 & 60                                       |                |
| 2-8 MB Exp Brd.                                    | 275            |
| Mdls 70 & 80                                       |                |
| 2-8 MB Exp Brd                                     | 325            |
| 2-14 MB Exp Brd                                    | 450            |
| 4-16 MB Exp Brd                                    | 475            |
| Adapter                                            |                |
| 2 MB Module                                        | CALL           |
| PS/1 Home System                                   |                |
| 512K Upgrade                                       | CALL           |
| 2 MB Upgrade                                       | CALL           |
| TOSHIBA PORTABLE MEMORY                            |                |
| T1200XE 2 MB Card                                  | \$89           |
| T1600 2 MB Card                                    | 99             |
| T3100SX 2 MB Card                                  | 85             |
| 4 MB Card                                          | 169            |
| T3100e 512K Card                                   | CALL           |
| 2 MB Card                                          | 85             |
| T3200SX 2 MB Card                                  | 89             |
| 4 MB Card                                          | CALL           |
| T3200 3 MB Card                                    | 175            |
| T1000SE, XE 1 MB Card                              | 89             |
| T5100 2 MB Card                                    | 99             |
| T5200: 8500 2 MB Card                              | 99             |

| STATIC ZIPPS                                                       |                   |
|--------------------------------------------------------------------|-------------------|
| 1x4 70ns DIPP                                                      | \$22.00           |
| 256x4 10/80/70 Zipp                                                | 5.99              |
| Video Zipps D42274V-08/07                                          | 7.00              |
| CACHE MEMORY                                                       |                   |
| 32x8-25                                                            | \$4.25            |
| 32x8-20                                                            | 5.25              |
| 32x8-15                                                            | 6.00              |
| 32x8-12                                                            | CALL              |
| 64x4-25                                                            | 6.00              |
| 64x4-20                                                            | 7.00              |
| 64x4-15                                                            | 10.00             |
| 64x1-20                                                            | 6.75              |
| 64x1-15                                                            | 6.75              |
| 8x8-20                                                             | \$2.75            |
| 8x8-25                                                             | 2.25              |
| 8x8-15                                                             | 3.99              |
| 16x4-25                                                            | 2.25              |
| 16x4-20                                                            | 2.75              |
| 16x4-15                                                            | 2.25              |
| 128x8-25                                                           | 32.50             |
| 128x8-20                                                           | CALL              |
| 128x8-15                                                           | CALL              |
| COMPAQ MEMORY                                                      |                   |
| Model                                                              | P/N               |
| LTE 286                                                            |                   |
| 2 MB                                                               | 117081-002 \$115  |
| 4 MB                                                               | 117081-003 175    |
| SLT 286                                                            |                   |
| 4 MB                                                               | 110237-001 299    |
| LTE 386S/20                                                        |                   |
| 2 MB                                                               | 12125-001 119     |
| 4 MB                                                               | 12125-002 195     |
| Contura Lite 20/25                                                 |                   |
| 2 MB                                                               | 129769-001 105    |
| 4 MB                                                               | 129769-002 155    |
| 8 MB                                                               | 129769-003 295    |
| Portable 386                                                       |                   |
| 1 MB                                                               | 107651-001 109    |
| 4 MB                                                               | 107653-001 299    |
| Portable III                                                       |                   |
| 2 MB                                                               | 10-7332-001 79    |
| EBD                                                                | 167811-001 199    |
| SLT 386                                                            |                   |
| 2 MB                                                               | 118304-001 119    |
| 4 MB                                                               | 118305-001 185    |
| Deskpro 386S (E. Board)                                            |                   |
| 4 MB                                                               | 11364-001 239     |
| 4 MB                                                               | 112534-001 169    |
| Deskpro 386/33L, 486/33L, 50/25                                    |                   |
| 2 MB                                                               | 115144-001 99     |
| 8 MB                                                               | 116561-001 335    |
| 32 MB                                                              | 116568-001 1275   |
| 6 Socket E. Board                                                  | CALL              |
| Deskpro 386/20e, 25e (E. Board)                                    |                   |
| 4 MB                                                               | 113645-001 99     |
| 8 MB                                                               | 116561-001 335    |
| 32 MB                                                              | 116568-001 1275   |
| Deskpro 386/20e, 25e (E. Board)                                    |                   |
| 4 MB                                                               | 113645-001 239    |
| Deskpro 386/20, 20e, 25e                                           |                   |
| 4 MB                                                               | 113132-001 169    |
| Deskpro 286N, 386N, 386SX/20, 386/25M, 486/33M, 486S/25M, 486S/16M |                   |
| 2 MB                                                               | 118689-001 95     |
| 4 MB                                                               | 118690-001 145    |
| 8 MB                                                               | 128877-001 294    |
| Deskpro 486/33L, 486/50L, 386/33L                                  | CALL              |
| Prolinea 3/25S & 3/25S2S                                           |                   |
| 2 MB                                                               | 141738-001 105    |
| 8 MB                                                               | 141742-001 375    |
| Prolinea 4/33                                                      |                   |
| 2 MB                                                               | 141682-001 95     |
| 4 MB                                                               | 141684-001 159    |
| 8 MB                                                               | 141685-001 299    |
| Other Models                                                       | CALL              |
| IBM PS/2 & PS/1 MEMORY                                             |                   |
| PS/1 286/386SX 2/4 MB                                              | \$95/149          |
| PS/1 Consultant                                                    |                   |
| Essential/Expert                                                   | 1/2/4/8 MB        |
|                                                                    | 45/79/155/299     |
| 386 Valuepoint                                                     | 2/4/8 MB          |
|                                                                    | 89/159/305        |
| 486 Valuepoint                                                     | 4/16 MB 169/595   |
| PS/2 30-286                                                        | 2 MB 89           |
| 50Z, 55SX, 65SX, 70                                                | 2/4 MB 79/145     |
| 40SX, 35SX, 35SL                                                   | 2/4 MB 79/149     |
| 70A21, A61, 121                                                    | 2 MB 109          |
| 80-11, 121, 311                                                    | 4 MB 210          |
| 95, 90, P75, PS/1 Pro                                              | 2/4/8 MB          |
|                                                                    | 110/149/305       |
| 16 Bit Exp Bd For                                                  | 50, 50Z, 60, 65SX |
|                                                                    | OK 144            |
| 32 Bit Exp Board for all 70 & 80 models                            | OK 164            |
| RISC 6000                                                          | 16/32/64 MB       |
|                                                                    | 745/1490/2890     |
| SUN MEMORY                                                         |                   |
| 4 MB                                                               | \$145             |
| 4/16 MB                                                            | 139/495           |
| 4/16 MB                                                            | 140/499           |
| 16/64 MB                                                           | 645/CALL          |
| 16 MB Classic                                                      | 625               |
| 64 MB                                                              | 2285              |
| 4/16 MB                                                            | 17,555            |
| SPARC II                                                           | 560               |
| Other Models                                                       | CALL              |
| LASER PRINTER MEMORY                                               |                   |
| Price includes Memory, Board & Installation Instructions           |                   |
| IBM LASER                                                          |                   |
| 4019/4019E                                                         |                   |
| 1/2/3.5 MB                                                         | \$89/119/169      |
| 4029 (All Model) 4 MB                                              | 139               |
| EPSON LASER                                                        |                   |
| 6000-2/4MB                                                         | \$114/175         |
| 7000-2/3 MB                                                        | 125/159           |
| Action LaserII                                                     |                   |
| -2/3/4/5 MB                                                        | 108/139/169/199   |
| HP LASER                                                           |                   |
| HP II/IID 2/4 MB Board                                             | \$105/169         |
| HP 4/4M 4/8MB                                                      | 149/289           |
| HP IIP, IIP+, IIL, IILD,                                           |                   |
| IILP 1/2/3/4                                                       | 60/95/134/159     |
| IILi 4/8 MB                                                        | 138/264           |
| LaserJet Fax 1 MB                                                  | 82                |
| Deskjet 500/500c 550C 256K                                         | 52                |
| Design Jet Plotter 4 MB                                            | 144               |
| PANASONIC LASER                                                    |                   |
| KXP4410/KXP4430                                                    |                   |
| 1/2/3/4 MB                                                         | \$89/115/149/184  |
| KXP4420/4450/4451                                                  |                   |
| 1/2/3/4 MB                                                         | 79/108/139/169    |
| KXP4450 1 MB                                                       | 111               |
| KXP4455 2 MB                                                       | 129               |
| OKI LASER                                                          |                   |
| OL400 1/2 MB Board                                                 | \$84/106          |
| OL800/820 2/4 MB Board                                             | 107/165           |
| OL810 2/3/4                                                        |                   |
| MB Board                                                           | 145/179/219       |
| QMS LASER                                                          |                   |
| PS 410 2/3/4 MB                                                    | \$119/165/189     |
| PS 860, 1700                                                       |                   |
| 1/4/8 MB                                                           | 53/133/166        |
| PS 815, 825,                                                       |                   |
| 815MR, 2/4/6                                                       | 168/232/295       |
| SHARP LASER                                                        |                   |
| 9500PS 1 MB                                                        | \$55              |
| JX-9500/9700                                                       |                   |
| 1/1.5/2.5/4                                                        | 105/135/188/344   |
| OTHERS                                                             |                   |
| Apple Laserwriter                                                  |                   |
| II/IINT/IINTX 4 MB                                                 | \$149             |
| Brother HL-4                                                       |                   |
| 2/3/4 MB                                                           | 119/165/189       |
| Brother HL-8E V 1/2 MB                                             | 99/139            |
| Compaq Pagemarq                                                    |                   |
| 15 & 20 1/4/8                                                      | 49/139/266        |
| Fujitsu RX7100/7200                                                |                   |
| 1/2 MB                                                             | 185/245           |
| Kyocera F800,                                                      |                   |
| F800Am F800T 2/4                                                   | 95/137            |
| NEC Silentwriter 90/290                                            | 99/124            |
| NEC Silentwriter 95 2 MB                                           | 104               |
| AST MEMORY                                                         |                   |
| Bravo 3/33(LC) 3255                                                | 2/8 MB            |
|                                                                    | \$84/299          |
| Bravo 486/25 & 4/33                                                | 2/8 MB            |
|                                                                    | 109/309           |
| Bravo 486LC                                                        | 4/8/16 MB         |
|                                                                    | 145/295/565       |
| Cupid-32 Board OK                                                  | 219               |
| Premium 386C 4 MB                                                  | 145               |
| Premium SE 450 4 MB                                                | 145               |
| Premium 386/25, SX, 33, 486/25                                     |                   |
| 1 MB                                                               | 40                |
| Premium II 386, 486                                                |                   |
| 1/4 MB                                                             | 37/145            |
| Executive Notebook                                                 |                   |
| 4 MB                                                               | 134               |
| Other Models                                                       | CALL              |

confirmed that the target machine is alive. This is the old ping, and it doesn't look like a particularly dangerous command to run.

On other systems, ping behaves differently, however. On Sequent machines, ping gives a more verbose report, telling us bytes and packets sent, bytes and packets received, and the elapsed time for the round trip. As with Sun's version, the Sequent implementation of ping exits after sending one packet. (Both Sun and Sequent versions provide for specifying the number of packets to be sent. The default is one.)

Sequent-% /usr/etc/ping al Bundy  
PING al Bundy: 56 data bytes 1 packets  
al Bundy is alive! 64 bytes from 130.214.51.3: icmp\_seq=0. time=70. ms

1 packets transmitted, 1 packets received, 0% packet loss round-trip (ms) min/avg/max = 70/70/70

If there is a consensus about what ping should do, it exists among Silicon Graphics, IBM, HP, and SCO. For all these systems, ping sends one packet per second and continues to send packets until it is interrupted (with Control-C or DELETE). The example below, taken from a Silicon Graphics machine, is typical of ping's behavior on systems from this group of vendors:  
SGI-% /usr/etc/ping al Bundy PING al Bundy (130.214.51.3): 56 data bytes 64 bytes from 130.214.51.3: icmp\_seq=0 ttl=254 time=2 ms 64 bytes from 130.214.51.3: icmp\_seq=1 ttl=254 time=2 ms ^C

—al Bundy PING Statistics— 2 packets transmitted, 2 packets received, 0% packet loss round-trip (ms) min/avg/max = 2/2/3

After the command has been interrupted, summaries are presented for packets sent and received and for elapsed time. And of course, the message declaring that the target is alive is missing.

This is the detritalization of ping. Somewhere along the line we lost interest in the simple declaration that Elvis was alive. Now we want to know instead just how alive he is, how many packets he'll drop, and what the turnaround time will be, and we're willing to risk the network to find out. Maybe it's time to think about alternatives to maturity. ■

**C.B.**

**Memory & Computers**  
1319 Jacklin Rd. • Milpitas, CA 95035  
(Jacklin Exit Off 680)  
TEL: (408) 946-5174 or 946-5175  
Fax: (408) 946-5376



The Printer Works Introduces the SP-29000

# This PostScript Laser Printer is Absolutely an Incredible Value!

Our price for this 6 ppm PostScript printer is about the same as the lowest priced 4 ppm printer without PostScript!

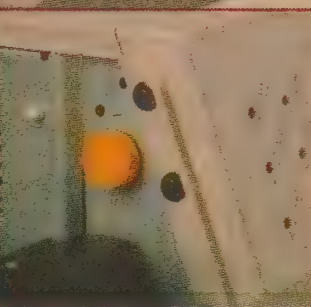
Only \$677  
With Toner



The Printer Works has been bringing you the best deals on PostScript printers for years. (Remember our "PostScript for Peanuts" campaign that offered the JetScript-CX for only \$995 when most other 8ppm PostScript printers were priced at over \$2,000?) The new SP-29000 printer is our best deal ever! It costs less and offers even more—just look at all the important features you get for only \$677:

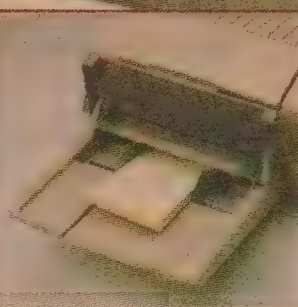
- ◆ PC and Macintosh compatible—the SP-29000 can connect to both simultaneously!
- ◆ High-speed, 32-bit AMD RISC processor for fast formatting of complex PostScript jobs
- ◆ Reliable 6 page per minute engine—the same model used in more expensive printers!
- ◆ MicroSoft TrueImage PostScript-compatible interpreter
- ◆ Great for all Windows and Macintosh applications
- ◆ 35 Scalable TrueType fonts
- ◆ AppleTalk, Centronics Parallel, and RS-232 Serial Interfaces

PostScript is essential for compatibility with professional desktop publishing and graphics applications. It's also easier to use for general business applications. If you've been shopping for a laser printer, you know that PostScript printers generally cost twice as much as non-PostScript printers. Our price for this PostScript printer is about the same as the lowest priced 4 ppm printers without PostScript. So don't risk being stuck without



#### Economy Toner Dial

Now it's easy to make your toner cartridge last longer, and still get good printouts! Simply turn down the print intensity dial while printing drafts, and turn it up again for the deep rich blacks you want on your final output!



#### High-Capacity Universal Paper Tray

The SP-29000 lets you print letterhead and envelopes without having to stop and switch cumbersome paper trays! One tray does it all! The high-capacity universal paper tray is fully adjustable for up to 250 sheets of letter, legal, or executive size paper. It can also be used for up to 25 envelopes.



#### All-In-One Toner Cartridge

This high-capacity toner cartridge contains a long-life super drum and enough toner to print 8000 pages before refilling! (That's 2-3 times more than other printers!) The toner is the latest micro-fine variety which produces super rich black areas and very sharp fine lines. These cartridges are readily available in the market (and from us!)

PostScript when you can now get it for the same price! Like every product we sell, this printer is backed by our 1 Year Parts and Labor Warranty. Unlimited free technical support is available from the friendly experts in The Printer Works' technical support department. If you're not completely satisfied for any reason, you can return it for a full refund within 30 days. No hassle, no questions asked! Quantities are limited—order yours today!

ORDER TOLL FREE  
**1-800-225-6116**

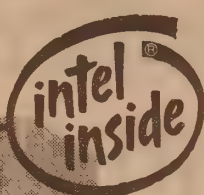


3481 Arden Road, Hayward, CA 94545





# Buy Something Better With Unbeatable 2 Year Parts 5 Year Labor Warranty



1. 2 year parts 5 year labor warranty
2. 30 day money back guarantee
3. All systems VESA compliant
4. All systems with ZIF socket
5. All systems Pentium Technology ready
6. All systems with 2 VLB slots
7. All systems with 72 Hrs burn in
8. Knowledgeable sales engineers
9. Unlimited free tech support
10. Worldwide satisfied customers

## SPECIAL

- Zif socket Pentium Technology ready VLB
- 128K cache
- 2 VESA Local Bus slots
- 1.2 or 1.44
- 1DE controller ZFD/2HD
- 2SIP 1G
- 101 enhanced keyboard
- Clock & Calendar
- OMB expandable to 32 MB
- Mini tower with 230W

**INTEL 486DX-33 \$525**  
**INTEL 486DX-50 \$655**  
**INTEL 486DX2-66 \$725**



### TRUE COLOR

- Pentium Technology ready VLB
- 4 MB 70 ns RAM up to 32MB
- 128 KB Cache
- 212 MB IDE Hard Drive
- 1.44 & 1.2 MB Floppy Drives
- Genoa 32 bit True Color VESA Local Bus accelerator with 1 MB
- CTX 14" 1024NI SVGA with .28 DP
- 101 Enhanced Keyboard
- 2 serial, 1 parallel, 1 game ports
- Mini Tower or Desktop case
- High Resolution Mouse

**INTEL 486DX-33 \$1299**  
**INTEL 486DX-50 \$1439**  
**INTEL 486DX2-66 \$1499**



### GUI STATION

- Pentium Technology ready VLB
- 8 MB 70 ns RAM up to 32MB
- 256 KB Cache
- 255 MB IDE Hard Drive
- 1.44 & 1.2 MB Floppy Drives
- 15" ADI Digital Flat NI SVGA with .28
- Genoa 32 bit True Color VESA Local Bus accelerator with 1 MB
- Maxi-Switch/Focus 101 Keyboard
- 2 serial, 1 parallel, 1 game ports
- Mid Tower case with 2 fans
- High Resolution Mouse

**INTEL 486DX-33 \$1669**  
**INTEL 486DX-50 \$1799**  
**INTEL 486DX2-66 \$1869**



### GUI PRO

- Pentium Technology ready VLB
- 8 MB 70 ns RAM up to 32MB
- 256 KB Cache
- 340 MB IDE Hard Drive
- 1.44 & 1.2 MB Floppy Drives
- 15" ADI Digital Flat NI SVGA with .28
- Orchid 32 bit True Color VESA Local Bus accelerator with 1 MB
- Maxi-Switch/Focus 101 Keyboard
- 2 serial, 1 parallel, 1 game ports
- Mid Tower case with 2 fans
- High Resolution Mouse
- 32bit Controller

**INTEL 486DX-33 \$1799**  
**INTEL 486DX-50 \$1939**  
**INTEL 486DX2-66 \$1999**



### Video

14" CTX 1024VGA .28NI .... \$265  
 15" ADI 4G Digital .28NI .... \$420  
 17" CTX Digital .28NI .... \$730  
 Gempa 8500 VLB ..... \$100  
 Orchid Fahrenheit VLB ..... \$140  
 Orchid P9000 VLB ..... \$349

### MB+CPU

486DX-33-128KVLB ..... \$400  
 486DX-50-128KVLB ..... \$530  
 486DX2-66-128K VLB ..... \$CALL  
 486DX EISA VLB ..... \$CALL  
 UltraStor 24F EISA SCSI ..... \$380

### Hard Drive

Western Digital 212 IDE ..... \$195  
 WESTERN DIGITAL 255 IDE ... \$220  
 WESTERN DIGITAL 340 IDE ... \$280  
 Maxtor 212 IDE ..... \$200  
 Maxtor 245 IDE ..... \$230  
 Maxtor 345 IDE ..... \$295

### MISC

1.2/1.44 ..... \$46/36  
 96/24 Fax/Modem ..... \$45  
 14.4/14.4 Fax/Modem ..... \$145  
 MMitsumi CD ROM 350 ms ... \$160  
 Trackball ..... \$10

## ENCY Multimedia Package : \$359

- Mitsumi Photo CD ROM 350 ms
- Sound Blaster Pro Deluxe Stereo Card & Bundled Softwares
- 3 Best Seller CD Titles:

1. Software Toolworks MPC Encyclopedia
2. Microsoft Bookshelf
3. Microsoft Works

**FREE Pair of shielded high output stereo speakers**

**MPC™ SB AUDIO CREATIVE**  
 Multimedia PC  
 • Come see the demo

- \* 2% discount with cash
- \* Freight, software, printer & special order items are not refundable.
- \* One year warranty for disk drives.
- \* Price and availability are subject to change without notice.
- \* 15% restocking fee within 30 day, no refund after 30 day
- \* The Intel Inside Logo is a trademark of Intel Corporation.
- \* All products referenced herein are trademarks of their respective companies.
- \* 2 year parts warranty for complete system only

**ENCY**  
**systems**

**(510) 226-1848**

**Fax: 1-510-226-0560**

**46743 Fremont Blvd., Fremont, CA 94538**

**Business Hours (PST): Mon-Fri : 8:30 to 5:30 Saturday: 10:00 to 4:00**



# Schedule/DOS

## *Scheduling Workgroups Across Heterogeneous Windows And DOS Environments*

**BY YACCO**

**T**he first time I saw a scheduling product from the company that developed Schedule/DOS was back about 1985 or 1986. To my best recollection, it was the first software product I ever reviewed, and perhaps the third or fourth product of any type I had written about other than DOS. That original program was called Sum:Time back then. The company itself was called Sum:Ware.

The company's products have always been networked scheduling applications. It was a very early player in the field. Even that first product had a marvelous interface—especially for early PC software—which gave you an overview of your entire scheduling apparatus. It also let you navigate to graphical representations of the functions you wanted with your cursor keys, and activate them with a click of the enter key. It was very advanced, and eventually a lot of other products came out with a similar look, that being an era before

look-and-feel suits became more popular than designing clever software. I liked it a lot back then, and still do.

Of course, the product's capabilities have continued to evolve over the intervening years. Along the way, the publisher fixed the one thing that was really wrong with it. They renamed it Network Scheduler (now Network Scheduler 3.0), the name under which v2 just won the groupware best-of-show award for the second straight year at a major industry trade show. They also renamed the company Powercore.

One important thing remained unchanged. The same principal developer continued to work on the technology, and to maintain the innovation and quality. The product currently has 1.2 million installations.

As scheduling software generally grew into part of the emerging groupware category, Network Scheduler continued to change. There were many versions, including Network Scheduler for CC:Mail, Network Scheduler for MHS, and another version for Microsoft Mail, Network Scheduler for Network Courier. In Network Scheduler 3.0, these have all been rolled into one, along with support for DEC TeamLinks.

### **SCHEDULE+ FOR DOS**

Now comes the latest product in the series, the DOS version of Schedule+. Powercore developed Schedule/DOS (the DOS version of Schedule+) for environments where Microsoft's Windows for Workgroups scheduling program is the standard. Inasmuch as Schedule/DOS is a work-alike version of Schedule+, developed at Microsoft's request, it is not a direct descendant of Network Scheduler, but more of a cousin that shares its networking heritage indirectly.

It lacks powerful Network Scheduler features such as a common schedule database. Instead, it substitutes the Schedule+ approach, which simply allows you to view another user's schedule. However, this gives the software the advantage of looking and acting just like the Windows for Workgroups version of Schedule+—which was designed by Microsoft—at least within the limitations of character graphics. And it lets DOS users combine their schedules with those of Windows users across a network.

There are some limitations that are specific to Schedule/DOS. For instance, you'll only be able to open a single calendar at a time, due to the screen real estate limitations of character mode. Schedule/DOS doesn't come bundled with Windows for Workgroups or with Windows. It does require the Microsoft Mail Post Office that comes in the Microsoft Mail and Schedule+ Extension for Windows for Workgroups. But that Post Office is the same one that's available separately from Windows in the Microsoft Mail product. If you already have a Microsoft Mail mail box, you don't need any version of Windows.

Schedule/DOS becomes available October 15. In an interesting arrangement, Schedule/DOS will be sold by Powercore, but Microsoft will do most of the marketing for it. That makes sense considering its role as a DOS product in Microsoft's grand Windows scheme of things. It should sell for a list price of \$395 per five users, or with corporate site licenses like those available for Schedule+.

### **SWITCHED ON YAC (RHYMES WITH BACH)**

Connecting multiple servers to a single monitor and keyboard can save enormous amounts of space. It can also cut the cost of systems by eliminating all but one monitor and keyboard for several servers. All by itself, cutting back on a few high-resolution monitors can represent significant savings.

Passive mechanical switches, like those

I've covered here before, are a quite inexpensive way to get the job done in many instances. However, there are systems for which they won't work. The PS/2 mouse port, for example, can't be switched without intelligence. Neither can keyboards be switched between PS/2s and PC clones without remapping their codes between every transfer. It's hard to get high-end video through a cheap mechanical contact too. And passive switches are only available in a limited number of configurations, for a relatively small number of systems, and with limited connector choices that can present a problem now that the Windows graphical interface is becoming more common as a corporate standard.

The ones I've been using could only switch the keyboard and monitor. Switching the mouse on a serial port required a second switch.

The solution is to use an intelligent file-server concentrator that uses a micro-processor to mediate every transfer between devices. They're not cheap. It takes

*As scheduling software generally grew into part of the emerging groupware category, Network Scheduler shipped in versions for many mail packages. In Network Scheduler 3.0, these have all been rolled into one, along with support for DEC TeamLinks.*

**L A N S**

### **RESOURCES:**

**Schedule/DOS, \$395**  
Powercore  
One Diversatech Dr.  
Manteno, IL 60950  
1-800-237-4754

**Network Technologies, Inc.**  
1275 Donner Dr.  
Aurora, OH 44202  
1-800-742-8324  
(216)562-7070



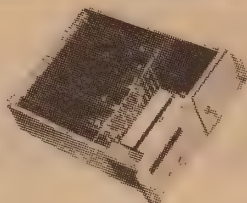
# INDUSTRIAL PC SOLUTIONS

## 19" RACK MOUNT SYSTEM



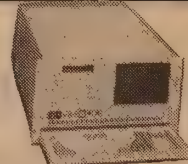
PRICE IS BASED ON THE CONFIGURATION YOU REQUIRE

## 19" RACK MOUNT ENCLOSURE



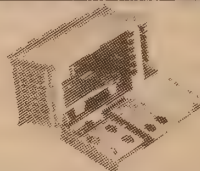
- 20 MODELS, UP TO 20 SLOTS
- UP TO 8 DRIVE BAYS

## RACK SYSTEM W/KEYBOARD AND MONITOR



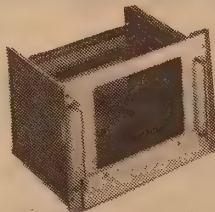
- MONOCHROME OR 10" VGA
- 10.5" X 19" X 24"
- MOTHER BOARD OR 8 SLOT PASSIVE BACKPLANE BOARD
- 5 HALF HEIGHT 5.25" BAYS

## 6-SLOT NODE IPC ENCLOSURE



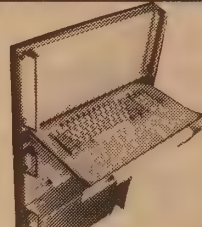
- COMPACT INDUSTRIAL PC
- WALL MOUNT PC CONTROLLER
- DRIVE HOUSING FITS 3.5" FDD & HDD
- 150W POWER SUPPLY

## MONITOR ENCLOSURE



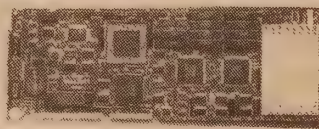
WE CARRY MONITOR ENCLOSURES FOR MOST 12" OR 14" MONITORS.

## RACK MOUNT KEYBOARD



FULL TRAVEL KEYBOARD 1 UNIT HIGH (1.75")

## SINGLE BOARD COMPUTERS

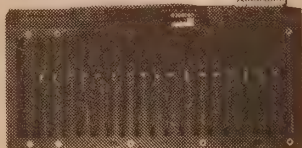


SINGLE BOARD w/ON-BOARD MULTI I/O  
486DX2-50/66  
486DX-50/33, 386DX-33  
386SX-25, 286-16 (HALF SIZE)  
(HALF SIZE)  
ALL CPU BOARDS w/USERS MANUAL,  
IDE HARD DRIVE CABLE, FDD CABLE,  
PARALLEL PORT & KEYBOARD ADAPTER



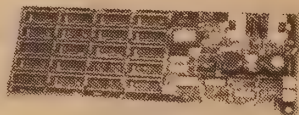
SINGLE BOARD w/ON-BOARD MULTI I/O  
486DX2/DX/SX-66/50/33/25MHz (Full Size or Half Size)  
386DX-33MHz, 386SX-33MHz (HALF SIZE)  
286-16MHz (HALF SIZE)  
ALL SINGLE BOARDS w/VGA available  
ALL SINGLE BOARDS w/users manual,  
IDE HARD DRIVE CABLE,  
PARALLEL PORT & KEYBOARD ADAPTER

## PASSIVE BACKPLANE BOARD



- ALL 16 BIT BACKPLANE BOARD
- 3, 4, 5, 6, 8, 12, 14, 18, 20 SLOT
- 14 SLOT SEGMENTED 6,4,4
- 18 SLOT SEGMENTED 5,4,4,5
- 20 SLOT SEGMENTED 5,5,5,5

## RAM/ROM DISK



- HIGH CAPACITY RAM/ROM DISK
- SINGLE DRIVE RAM/ROM DISK

Warranty Includes 1 year parts and labor.  
Prices subject to change without notice.

**J&K TECHNOLOGY** TEL: 510-226-9484 FAX: 510-226-9482  
43224 CHRISTY ST. FREMONT, CA 94538 MON.-FRI. 8AM-6PM

## BUSINESS SOLUTIONS

a processor for every port, and special programming for every type of port, as well as expensive reed switches that can be switched by solid-state electronics. Concentrators manufactured by Network Technologies Inc., for example, begin at \$800 for a 2-port unit and run all the way to \$11,000 for one with forty-eight ports.

A 4-port unit, from Network Technologies, that does the same job as a passive mechanical unit costs a steep \$1112. However, it does all the things that the mechanical switch can't. Since it replaces mechanical contacts with reed switches, and eliminates all the loose wires used with typical rotary switches, it provides far higher quality video. Furthermore, reed switches maintain that quality over their life because they're sealed and can't oxidize. The video circuits and other switches also have intelligence on them, so the device automatically remaps the keyboard each time you switch between a PS/2 and a PC, and memorizes the status of the toggle keys (i. e., Caps, Num, and Scroll Lock) for each computer. It even detects which ports are connected to each type of machine on its own.

On systems with a PS/2 mouse port, the concentrator keeps them from thinking there's no mouse connected when you switch to another unit, and it also stores the correct mouse mode setting for every machine—if Windows shuts the mouse off when it closes on one server, the rodent still works for the others.

Finally, the Network Technologies concentrator simulates a keyboard connection for all servers simultaneously. That's the most critical distinction between it and a passive box, because it allows all servers attached to the concentrator to reboot automatically without an attendant. Without the generation of this simultaneous signal, all but one of the servers would hang up on an unattended reboot. This feature also supports automatic soft restarts on communication servers that are designed to reset after each call. It's in providing this essential level of reliability, absolutely required in large networking environments, that an intelligent switch pays for itself over and over.

Almost any combination of connectors is available from Network Technologies. They include keyboard connectors with 5-pin DIN or 6-pin mini-DIN. Mouse ports are available in either serial or 6-pin mini-DIN for PS/2 connection. Video connections are available in high-density 15-pin VGA and the older 9-pin connectors. And BNC or 13W3 connectors are available for Sun workstation models. Optional cables of all types are available in 6-, 10-, and 15-foot lengths, as well as in custom lengths up to several hundred feet. Power cords are offered for any domestic or foreign configuration for 110 or 220v and at either 50 or 60Hz. ■

## DATA RECOVERY

### Drives • Tapes • Optical Media

We offer service on multiple platforms - DOS, Novell, Macintosh, UNIX, XENIX, Banyan, OS/2, Sun, Bernoulli and More!

Our custom data recovery increases your chance for a successful recovery. Our specialized techniques include:

- Class 100 Clean Room
- Proprietary Software Tools
- Recovery of Hard Drives, Tapes and Optical Media
- Novell Network Fixtures/Software Tools
- Data Protection Safeguards

**GIGABYTES**

TEL: (510) 440-8032 FAX: (510) 440-9099



# CONQUER



**CONQUER™**  
is a full-featured  
Windows™ game  
taking advantage  
of high resolution and  
high-speed Windows  
systems! Challenge the  
computer or take on other  
players via modem or network  
connection.

**Buy now for only \$49.95!\***

**CALL 1-800-723-9038**

**\*Price does not include shipping and handling. VISA/MC accepted. Price in U.S. dollars. Dealer inquiries welcome.**

**All product and brand names mentioned are trademarks or registered trademarks of their respective holders.**

**Elpin Systems™ 45 S. Victoria, Suite 401, Milpitas, CA 95035-9832**



# AND DIVIDE



# Some Current Developments In Telecommuting And Telework

*A New Study Examines How Telecommuting Technologies Can Help With Work In The Office And Meet The Needs Of Organizations With Expensive, Local "Travel-For-Work" Requirements*

**BY ROBERT MOSKOWITZ**

## TELECOMMUNICATIONS FOR CLEAN AIR

In previous articles in this series, I've detailed some of the efforts that are part of the Telecommunications For Clean Air program, which is under the direction of Walter Siembab, and I've hinted at some of the early results from this ambitious effort. Now I have more detailed information to share with you.

During the past year, the staff of Telecommunications For Clean Air closely studied three California city governments (Huntington Beach, Lakewood, and Rialto). Their main purpose was to determine why employees leave their offices to do business, how far they go when they leave, what this travel actually costs, and how to reduce or eliminate at least some of it.

The study team found that "travel-for-work" trips average between eleven and eighteen miles, and that nearly half of all these trips occur between 6 am and 10 am—when rush hour traffic is at its worst. Including salary and expenses, these trips cost between \$1.54 and \$2.17 per mile—that's anywhere from \$17 to \$39 per trip. (In private industry, where salaries may be higher than they are in government, costs may stretch well above the \$39 figure.) What's more, virtually all these "travel-for-work" trips involved a single person driving alone, and as many as half of them were for the purpose of attending a meeting.

It would be difficult to think up a better scenario than this for trying out telecommuting strategies and technologies as a way to cut down on some of the wasted time, extra cost, environmental congestion, and pollution generated by these "travel-for-work" car trips.

In fact, the staff of Telecommunications

For Clean Air experimented with five "families" of telecommuting technology, to see how well each one would meet the needs of organizations with expensive "travel-for-work" requirements. Here are brief descriptions of each technology, and discussions of how well each one met the needs of organizations with employees who travel-for-work:

- **Audio Teleconferencing:** This is a voice-only communications set-up for connecting three or more people working at two to fifteen different sites. The communications takes place over the public dial-up telephone network, but may also require an "audio bridge" device when more than four different sites are to be connected. This "audio bridge" may be rented at about \$0.38 per minute, or purchased for about \$10,000.

Because audio teleconferencing is relatively inexpensive yet very effective at bringing people electronically together over a distance, it appears to have considerable potential for immediate use to eliminate unwanted travel. The audio technology is not only easy to use, it is comfortable for those using it because it resembles the very familiar sensation of talking on the telephone. Furthermore, because audio teleconferencing technology is relatively cheap and easy to use, it is possible to hold meetings using it without a great deal of advance notice or planning. It's also easy and very effective to supplement the audio teleconferencing technology with separate fax machines, which allow the immediate exchange of written materials between any or all of the audio teleconferencing sites, at very low cost.

- **Computer Teleconferencing:** This is a document-only communications set-up for exchanging information between comput-

ers. It also uses the public dial-up telephone network, and requires only an inexpensive modem and communications software on each computer. Of course, you must also have the computer. With this technology, messages are held within the system until a recipient calls for them. This makes it unnecessary for all the parties to be on the line at the same time—a significant advantage for teleconferencing across time zones.

Computer teleconferencing has proven itself a very effective way to post and disseminate information among a group of people working in different locations, time schedules or across different time zones. Private commercial and noncommercial systems (called bulletin boards or online services) have proven themselves effective and viable over many years. The biggest problem remaining is that computer teleconferencing requires each participant to be working a computer that contains a modem and communicating software. Unless you're with someone who can handle the software and hardware for you, it's also important that you feel comfortable using the computer. Despite the tens of millions of computers now in use, the staff of Telecommunications For Clean Air estimates that fewer than half of employees who travel-for-work are ready to make immediate use of computer teleconferencing.

- **Desktop Video Teleconferencing:** This is similar to the plain-vanilla computer teleconferencing described above, but includes a special video camera mounted on each computer, and special hardware and software that allows the computer screen to show what the cameras are seeing at as many as four other sites. This system requires ISDN telephone service, which is

## RESOURCES:

### Telecommunications For Clean Air Program

5944 Chariton Ave.  
Los Angeles, CA  
90056  
(310)645-1129

**San Diego Telecommuting Association**  
PO Box 34495  
San Diego, CA 92163  
(619)534-5705

**Bellcore**  
Redbank, NJ

Copyright © 1993 by Robert Moskowitz. All rights reserved. Robert Moskowitz is a business consultant based in Woodland Hills, CA, who writes frequently on productivity, office automation and technology.



# BUYING A COMPUTER CAN BE FUN!

Are you afraid of walking into a computer store and being overwhelmed by computer talk?...well you don't have to be afraid anymore. At Winners Circle we offer an informal and relaxed atmosphere. Our knowledgeable sales staff takes the time to help you choose the right computer from our large selection of major brands. Come to Winners Circle and find out why...our computers are better.

## Andy's Special VESA Machine

- 486SX-25
- 4MB RAM
- 5.25" and 3.5" Floppy
- 120MB Hard Drive
- Special Software Bundle
- DOS 6
- Windows 3.1
- Mouse
- Local Bus Video
- Local Bus Controller 3x Faster
- .28 Color VESA Monitor (SVGA 1024x768)

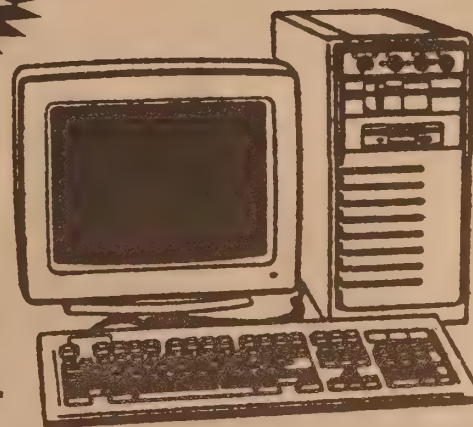
WORD PERFECT 6.0  
SEE IT FAXED DIRECTLY  
FROM THE PROGRAM!

ONLY \$129

FASTER THAN FAST!

\$1479

w/ad-exp. 10/18



### PC Upgrades

Upgrade your Leading Edge or any computer to 386DX-40 .....\$399

245MB Hard Drive Upgrade for as low as .....\$300\*

120MB Hard Drive Upgrade for as low as .....\$199\*

\* with exchanged core

### VIDEO TOASTER 4000



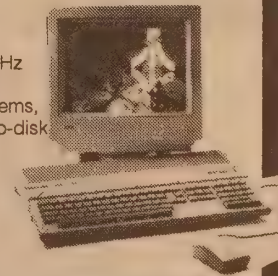
SUPER TOASTER  
ON DEMO &  
IN STOCK

Newtek  
Authorized

Create broadcast quality television on your desktop!

### Atari Falcon

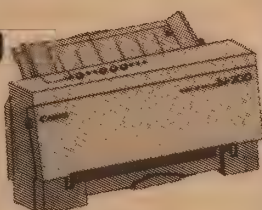
- 68030-16MHz CPU
- Pipelined architecture
- Motorola 56001 DSP at 32MHz
- DSP connector allows easy connection to fax/data modems, voice mail systems, direct-to-disk digital audio recorders
- Direct processor slot
- Super VGA
- Eight 16-bit digital audio
- MIDI In /MIDI Out



### Canon Bubble Jet 200

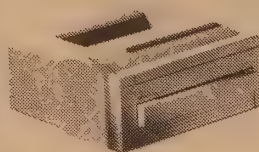
#### Breakthrough Technology

Canon's new Bubble Jet printer incorporates new print technology that produces laser quality printing at a truly affordable price. With 360dpi resolution, the BJ 200 prints text and graphics with the speed and quality of a laser printer. And the new compact size fits anywhere easily, without taking up valuable space.



\$299 with ad

### LASER PRINTERS



For: \$699

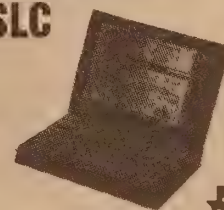


EPSON

TEXAS  
INSTRUMENTS

### TEXAS INSTRUMENTS WIN 486SLC

- 25MHz Processor
- 80MB Hard Drive
- 4MB RAM
- DOS, Windows 3.1
- Weighs 5.6lbs.
- Trackball



\$1529

TEXAS  
INSTRUMENTS

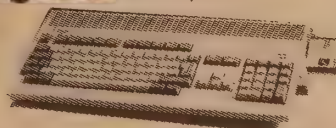
### AVR 800 Scanner/CLX

- High resolution 1600x1600 dpi output
- 24 Bit Color Scanner, scans 16.8M colors
- Bundled with Picture Publisher™ software
- Type-Reader™ OCR software upgradable



PC WINDOWS VERSION \$1316  
MAC VERSION AVAILABLE

### Amiga 500 Personal Computer

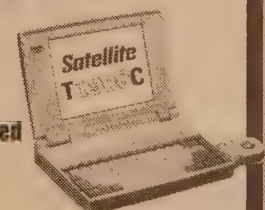


Commodore  
AMIGA

DEMO STOCK  
\$200

### Toshiba 1900

486SX-20MHz  
4MB RAM  
120MB Hard Drive  
DOS & Windows pre-installed  
Trackball



\$1839

TOSHIBA

#### FEATURING TOP RATED SERVICE

- Friendly, Knowledgeable Staff
- Full Time Tech Support
- In-House Authorized Repairs
- Free Public Domain Software
- Free Training

#### PRODUCT SELECTION

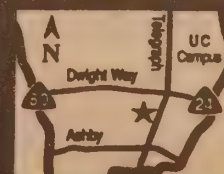
- Top-Rated Major Brand Computers and Printers
- CD-ROM
- Tape Backup
- Laptop Computers
- Modems and Fax Machines
- Large Selection of Software & Accessories
- Color Desktop Publishing



# WINNERS CIRCLE SYSTEMS

2618 Telegraph Ave. • Berkeley, California • 510-845-4814 • Fax 510-845-2400

Hours: Monday Thru Saturday 10:00-6:00





# BUSINESS SOLUTIONS

widely available in California and the US, but which is more expensive than ordinary telephone service.

• **Audio-Graphics Teleconferencing:** This is a system for exchanging high-resolution documents—such as blueprints, designs, photographs, and so forth—between two to

eight different sites equipped with the necessary computer hardware and software. It uses the public dial-up telephone network, but rather than just one call this technology requires two simultaneous calls between the connected sites.

• **Meeting Room Teleconferencing:** This

is the full-motion, full-color video conferencing technology so frequently mentioned in connection with high-tech business meetings. The newest technology is more portable than ever, and allows several sites to be linked in a single teleconference, although only one site at a time can be on-screen. The system works only with special telephone service that must be ordered from the local telephone companies at each site. The service can be permanently provided, but costs are so high that in many instances it makes sense to hook up the necessary services for each conference and disconnect them again afterwards. Although hardware costs to set up each meeting room site have come down below \$75,000, per-minute charges can still add up to prohibitively high sums.

All three types of visual teleconferencing—Desktop Video, Audio-Graphics, and Meeting Room Teleconferencing—offer very dramatic advantages over Audio and Computer Teleconferencing.

However, all three types of visual teleconferencing have some practical drawbacks:

These systems are more expensive than other types of electronic communications systems.

These systems can be used only with an operator who has received a fair degree of specialized training.

In most situations, these systems are more suitable for smaller groups at a particular site rather than larger groups, a circumstance which makes it more difficult and time-consuming for them to repay the cost of operations, as well as the original investment in equipment and training.

Despite any drawbacks, the staff of Telecommunications For Clean Air determined that for the three cities studied, even the simplest telecommuting technology would afford major cost reductions and efficiencies. It was estimated that an investment of \$1.125 million in teleconferencing equipment would allow the employees of these three city governments to telecommute to a major portion of the meetings to which they now travel. If telecommuting technology eliminated only 10% of the travel-for-work currently taking place, the result would be a savings of more



## NOW THEY'LL RUN ON YOUR DESKTOP



Californians can now take full control of their finances with Wells Fargo ON-LINE. With direct access to the bank from your Macintosh® or IBM® compatible PC, it's like opening a 24-hour Wells Fargo office right in your house.

### Tap Directly Into Your Accounts

Review the last forty days of activity for each of your Wells Fargo accounts. Confirm that a check has cleared. Verify your deposits.

With Wells Fargo ON-LINE, you can access your accounts around the clock—and download information to spreadsheet or money management programs.

### Pay Your Bills Online

Wells Fargo ON-LINE saves you time and

postage with virtually unlimited bill paying. You can schedule recurring payments like a car loan or mortgage up to a year in advance—and let us worry about the details.

### Call For A Demo Diskette Today

Give the stagecoach a test drive for just \$3.95. Call 1-800-PC-WELLS, ext. 333 and we'll send you a demo diskette that takes you through all the features of Wells Fargo ON-LINE.

Sign up for Wells Fargo home banking and we'll apply the cost of the diskette to your ON-LINE start-up kit. We'll also waive the fee for your first month of ON-LINE service.

Call for a diskette today. And discover the control you get when you boot up your bank.



## WELLS FARGO BANK

©1992, WFB, N.A.

Start-up kit: \$8.95. Service fee: \$12.95/Month (First month free with offer). IBM is a registered trademark of IBM Corporation. Macintosh is a registered trademark of Apple Computer, Inc.

Member FDIC



than \$5.5 million per year, and the elimination of more than 4.5 million vehicle miles traveled each year. The new equipment would pay for itself within three months!

However, the city governments participating in this study are generally experiencing severe funding limitations that make it impractical to install the necessary equipment within a reasonable time-frame. It is far more likely that private industry will use the results of this and other studies to calculate that the expense of such meeting facilities will be repaid quickly enough to make the investment worthwhile.

## TELECOTTAGE '93

Australia is the site of a major conference on telecommuting and telework, scheduled for November 29 through December 1, 1993. For anyone suffering from the Northern Hemisphere's winter doldrums, a trip to Australia for this conference can offer a broad range of intellectual and other benefits.

The term "telecottage" is used to denote multipurpose learning and work centers established by rural communities to benefit their citizens. The telecottages provide

opportunities for people living far from the main centers of commerce and culture to receive local training in telework, and then to do "distance working" or to learn through "distance education" programs. The telecottage can also be used to provide other benefits, such as delivering tele-services to the local community and reducing the social isolation of local citizens.

The program planned for Telecottage '93 is international in scope. Speakers and presenters will include Gil Gordon, a noted telecommuting consultant, Wendy Spinks, a founding member of the International Telework Forum, Ann Moffatt, a telecommuting consultant who works both in the United Kingdom and Australia, and many others.

Telecottage '93 is sponsored by a number of large organizations and agencies, including Telecom Australia, the Australian

## THE TERM

### "TELECOTTAGE" IS

USED TO DENOTE

MULTIPURPOSE

LEARNING AND

WORK CENTERS

ESTABLISHED BY

RURAL

COMMUNITIES.

Department of Primary Industries' Telecentre Program, the Australian Administrative Services Department's Office of Rural Communities, and the International Association of Community Tele-Service Centers. These organizations see telecottages (and other forms of telework) as means of providing major expansions in economic opportunities and income growth in remote areas.

For those interested in learning more about Telecottage '93, the conference will be held at: Pan Pacific Hotel, 81 Surf Parade, Broadbeach, Gold Coast,

Queensland, 4218 Australia. For more information, write to the conference's administrative headquarters: Winkler Marketing Services LTD, PO Box 889, Kenmore Queensland 4069 Australia, or telephone them at: 011-61-78-783-358. Fax: 011-61-78-782-689.

## DUBLIN CONFERENCE

A two-day conference on the Psychological Aspects of Telework in Rural Areas will be

*continued on page 94*

## United Solutions, inc.

### U.S.I/486V.L BUS GREEN PC

- \* E.P.A Energy star performance
- \*All recyclable, scratch resistant, EMI shielded, light weight, one screw assembly casing, convertible to mini tower and beautifully designed by an award-winning group in the U.S.A
- \*Sleep signal to a "GREEN"-power supply and hard disk, plus CPU clock reduction and monitor shut off.
- \*Wakes up with a touch of the mouse or keyboard.
- \*Supports ALL 486 CPU family and Pentium.<sup>TM</sup>\*SIS single chip 85C460 chipset.\*Write-back and write-through-cache.
- \*2 VESA master and 7 ISA slots.



A complete variety of Video Boards including the 2 Meg VL-BUS Tseng labs W32i and Cirrus Logic GD5426 and Multimedia cards are available.

Dealers, distributors and VAR,s welcome, Check our prices.

UNITED SOLUTIONS, INC. SALES:1(800)653 0001

6382 ARIZONA CIR

LA CA 90045

TEL:1(310)645 3232

FAX:1(310)6450044



# WE WON'T MATCH ANYBODY'S WE'LL BEAT IT.

## WITH THE BEST 486 PRICE/ PERFORMANCE—GUARANTEED.

When it comes to value in powerhouse PCs, nobody beats Shasta. Because for pure price/performance, we won't be undersold. Ever. Our line of 486 systems for corporate and home-office use covers the entire performance spectrum—from starters to screamers. They're loaded with features, and engineered to the highest standards, using only quality Elitetgroup motherboards. And they're available now at unbeatable price points. Only from Shasta.

## READY TO SHIP—NOW.

The standard Shasta systems shown here are preconfigured and ready to ship. While our supplies last and if we have your system in stock, we'll ship it to you within one working day. We must receive your order by 1 p.m. Pacific time, with your valid check or credit card. If we promise you a shipping date and for some reason we can't meet it, we'll ship your order at our expense.

## COVERED BY THE SHASTA PROTECTION PLAN.

Even at these rock-bottom prices, we still back each and every system we sell with the best package of no-risk guarantees on service and support:

- *Customer satisfaction:* 30-day money-back guarantee on all purchases.

- *Warranty:* 1-year on-site limited warranty.
- *Express replacement service:* For the first 30 days, we'll repair your computer within 48 hours of receiving it.
- *Free technical support:* We offer lifetime toll-free technical support for as long as you own your Shasta system.

## FOR REAL VALUE, CALL TODAY.

No one beats Shasta for PC quality, delivery, service and price/performance. No one. We guarantee it. For a free consultation or to order, talk to one of our knowledgeable sales consultants today. They'll see that your standard system is shipped immediately, or help you design a custom PC to your exact specifications.

## CALL TOLL-FREE NOW 1-800-546-9888

Mon-Fri 7 a.m. to 7 p.m. (Pacific time)

Shasta Computers  
46761 Fremont Blvd.  
Fremont, CA 94538  
Tel: (510) 249-9204  
Fax: (510) 249-9538

## UPGRADE OPTIONS FOR ALL MODELS

- Add 5.25-in. FDD [\$53]
- Upgrade RAM from 4 to 8Mb [\$215]
- Upgrade RAM from 4 to 16Mb [\$477]
- Add secondary cache from 0 to 128Kb [\$25]
- Add secondary cache from 0 to 256Kb [\$50]
- Upgrade secondary cache from 128 to 256Kb [\$25]
- Upgrade monitor to non-interlaced .28mm d pitch [\$25]
- Upgrade monitor to ADI 3E+ 14-in. [\$90]
- Upgrade monitor to ADI 3G 14-in. [\$95]
- Upgrade monitor to ADI 4G 15-in. [\$160]
- Upgrade monitor to ADI 5A 17-in. [\$550]



Shasta Computers contain an Intel486™ microprocessor. The Intel Inside logo is a trademark of Intel Corporation.



The ADI MicroScan 3E+ 14-in. monitor was awarded PC Magazine's Editors' Choice in the March 16, 1993 issue.

Desktop System

Slimline System

Prestige Desktop System





# PRICE/PERFORMANCE.

**FREE**  
with all systems  
MS-DOS 5.0, Windows 3.1  
and Microsoft compatible  
3-button mouse  
**1-year on-site  
limited warranty**

## SHASTA 486 \$1161 DESKTOP SYSTEM

| Intel486 | 130Mb  | 170Mb  | 214Mb  | 250Mb  | 340Mb  |
|----------|--------|--------|--------|--------|--------|
| SX25     | \$1161 | \$1181 | \$1211 | \$1247 | \$1352 |
| SX33     | \$1257 | \$1277 | \$1307 | \$1343 | \$1448 |
| DX33     | \$1382 | \$1402 | \$1432 | \$1468 | \$1573 |
| DX2/66   | \$1642 | \$1662 | \$1692 | \$1722 | \$1833 |

- Elitegroup 486 motherboard
- Integrated 8Kb cache, upgradeable to 256Kb
- 4Mb, 70ns high-speed memory, expandable to 32Mb
- 6 ISA slots
- 3.5-in. floppy drive
- 1024 x 768 SuperVGA adapter, with 1Mb RAM
- 1 parallel, 2 serial, 1 game port
- Enhanced 101-key mechanical keyboard
- 14-in., 0.28mm dot pitch SVGA color monitor, 1024 x 768
- Ergonomic desktop chassis with 200W power supply

### Option:

- Upgrade to Prestige Slimline molded chassis with 85W power supply [\$20]

## SHASTA 486 \$1722 MULTIMEDIA SYSTEM

| Intel486 | 130Mb  | 170Mb  | 214Mb  | 250Mb  | 340Mb  |
|----------|--------|--------|--------|--------|--------|
| SX25     | \$1722 | \$1742 | \$1772 | \$1808 | \$1913 |
| SX33     | \$1818 | \$1838 | \$1868 | \$1904 | \$2014 |
| DX33     | \$1943 | \$1963 | \$1993 | \$2029 | \$2134 |
| DX2/66   | \$2203 | \$2223 | \$2253 | \$2289 | \$2394 |

- Built-in stereo amplifier, 5 Watts (RMS) per channel, frequency response 20 to 20KHz
- Front panel controls:
  - Sound source
  - Microphone and headphone jacks
  - Volume control
- Elitegroup 486 motherboard
- Integrated 8Kb cache
- 4Mb, 70ns high-speed memory, expandable to 32Mb
- 6 ISA slots
- High-performance multimedia audio adapter
- CD-ROM drive with an abundance of CD titles bundled
- 3.5-in. floppy drive
- 1024 x 768 SuperVGA adapter, with 1Mb RAM
- 1 parallel, 2 serial, 1 game port
- Enhanced 101-key mechanical keyboard
- 14-in., 0.28mm dot pitch SVGA color monitor, 1024 x 768
- Integrated MPC chassis with 200W power supply

## SPECIALS FOR THE MONTH!

142-KEY PROGRAMMABLE  
KEYBOARD  
(MCK-142Pro)

**\$59 EACH**

HI-RES SERIAL MOUSE  
(MODEL MS-400)

**\$9 EACH**

- 24-user defined programmable function (PF1-PF24) keys for complete customization
- 8K keystrokes to be stored in CMOS SRAM chip of keyboard
- 12 special function keys on the left
- High-performance microprocessor and lithium battery-backed memory
- 8-direction arrow cursor pads separate numeric keys for spreadsheet use

- Ergonomic/stylish design can be used with IBM PC/XT/AT and compatibles
- Easy setup and comfortable to use without fatigue. Fingertip control and pinpoint accuracy
- Bundled mouse program disk for use with most software applications, including Windows and MS-DOS applications
- Acceleration feature moves more quickly across the screen—using just a few inches of desk space
- Work faster, smarter and more productively

Mid-Tower  
System



Multimedia System



**Shasta**



# Developers And Programmers—To Incorporate Or Not?

## Tax Benefits, Pitfalls, And Options

**BY DAVID A. SIMON, CPA and JENNIFER R. CHERNISS**

### RESOURCES:

David A. Simon  
Certified Public  
Accountant  
Oakland  
(510)893-5753

#### "The Accumulated Earnings Tax"

24 *Tax Advisor* 143  
(March 1993)

American Institute of CPAs

#### "Definition of Personal Service Corporations Vary"

49 *Taxation for Accountants* 22  
(July 1992)

Warren Gorham Lamont

Copyright © 1993 by David Simon. All rights reserved. David A. Simon, CPA (M.S. Taxation) is in tax and accounting practice in Oakland and writes on a variety of business issues. His clients include professionals and businesses throughout the state. He can be reached at (510)893-5753. Jennifer R. Cherniss, a free-lance writer based in Berkeley, specializes in making boring technical information seem less so.

Somewhere in the evolution of American entrepreneurial capitalism, a myth has crept into our collective psyche. The belief, stemming from some primal instinct telling us we won't be eaten by rats if we dress in tiger skin, is that we can save on taxes if we incorporate. Computer programmers and software developers are apparently not immune to this spiritual leaning, and my accounting practice is visited from time to time by those seeking to protect themselves with this change of coloration.

But tax laws classify corporations into categories, and special rules regarding software determine the tax treatment for developers. The key to taking maximum advantage of these laws is to structure your form of business, as well as your software development or licensing agreements, with these rules in mind.

Whether you pay more or less tax as a corporation depends on what exactly you do. Are you an independent contractor serving one, or many, clients? Are you developing "on spec," taking on risk? Or are you actually an undeclared employee, endangering the employer with the threat of penalties for avoiding payroll taxes? Merely incorporating is never the whole story for software developers.

Many companies needing custom software prefer to out-source; instead of hiring programmers as employees, they engage outside consultants. Or, users buy or lease software rather than produce it in-house.

It's no mystery why. These companies seek to eschew the risks and burdens that come with hiring more workers—payroll taxes, medical insurance, hiring costs, retirement plans, disability, sick leave, severance pay, a growing list of liability exposures. Increasingly, would-be employers are opting out and contracting the work to consultants.

Two hypothetical cases will illustrate a sampling of the different benefits and pitfalls resulting from alternative relationships between developer and client or user.

### RUNNING INTO THE IRS WALL

Eddy is paid \$60 an hour to develop a database analysis routine as an outside consultant for Suishi Electronics. Suishi offers to hire him as an employee, but for only \$30 an hour. Eddy prefers the \$60, figuring he'll fund his own retirement plan and pocket the difference.

He largely works on his own, with little direction, minimizing the risk that the IRS would reclassify him as an employee. At the end of the year, they send Eddy and Uncle Sam a Form 1099 reporting his annual income. Eddy assumes no entrepreneurial risk in the project, nor does he own any equity interest in the software he's writing—Suishi not only owns it, but they hold the bag if the software is bug infested or the project runs over budget. All Eddy worries about is whether or not Suishi will renew his contract.

Then Eddy incorporates. The IRS considers Ed, Inc. a "personal service corporation." As such, the corporation's taxable income is all taxed at the highest current corporate tax rate, a flat 34%. The corporate graduated rate structure (whereby the first \$50,000 is taxed at 15%, and the 34% rate only kicks in at \$100,000) is not available to personal service corporations.

Avoiding personal service corporation status is an important tax planning issue for many software developers. Once tagged as a personal service corporation, the entity suffers a variety of restrictions on its tax choices. A recent article in the tax literature reviewing areas of concern is "Definition of Personal Service Corporations Vary," 49 *Taxation for*

*Accountants* 22 (July 1992). (For a complimentary copy, reprinted with permission of the publisher, Warren Gorham Lamont, please call my office at 510/893-5753.)

Eddy might reduce his corporation's taxable income to zero by having the corporation pay him a salary, but he'll still be personally taxed on that salary, and his compensation will be subject to Social Security and other employment taxes. Even if the corporation has no taxable income, it will be subject to the California minimum tax of \$800.

The incorporation and salary route may permit Eddy to realize a few tax benefits, including the corporate deduction for medical expenses and other fringe benefits, but the net gain would probably not be much. Indeed, after Eddy surveys a few health insurance companies for individual medical plans, he opts out of coverage, just as his would-be employer would have wanted to do.

As if this weren't living dangerously enough, if Suishi is substantially Ed, Inc.'s only client, he needs to watch out for a special weapon in the IRS arsenal: Code Section 269A. This law was developed to fight personal service corporations formed or used principally for tax reasons. In essence, the law allows the IRS to ignore the corporation and reallocate all income, deductions, credits, etc. directly to Eddy.

### THE CASE OF THE SMARTER PROGRAMMER

Xavier formed a corporation, Corporation X++, which develops and licenses database management software, primarily to manufacturers of small objects with many parts. Technically, the kind of software he produces and his clientele are of the same genre as Eddy's. But from a tax perspective, Xavier has structured the deal very differently.

Suishi wants to obtain Xavier's database



-Since 1986

# The Super Link

MON-FRI: 9AM - 6PM  
SAT: 10AM - 4PM  
CREDIT CARDS WELCOME

3537 Kifer Road. Santa Clara, CA 95051 Tel: (408)-733-2558 Fax: (408)-733-3890

## CPU Cooling Fan

For only \*\* \$15 \*\*

## MONITOR

### HITACHI

CM1584MU 15"  
SuperScan 1024x768 72Hz  
Flicker-free, None-interlaced  
Anti-static, Anti-glare  
Low ELF&VLF EMISSION  
(50-100Hz) refresh rate  
MPRII Standards

**\$475**

## SPECIAL OF THE MONTH

### MultiScan

|                      |       |
|----------------------|-------|
| 14" 1024x768 0.39    | \$208 |
| 14" 1024x768 0.28    | \$245 |
| 14" 1024x768 N-I .28 | \$265 |
| 15" 1280x1024 0.28   | \$388 |

GREEN PC MONITOR is now available! NANA0 Automatic Power ON/OFF with the PC function.

|              |              |             |
|--------------|--------------|-------------|
| <b>NANA0</b> | F760IW (21") | .....\$2055 |
|              | F550IW (17") | .....\$1075 |
|              | F340IW (15") | .....\$665  |

|                  |     |             |
|------------------|-----|-------------|
| <b>Viewsonic</b> | 20" | .....\$1755 |
|                  | 17" | .....\$1059 |
|                  | 15" | .....\$525  |

|     |            |
|-----|------------|
| 6FS | .....\$515 |
| 5+  | .....\$475 |
| 5E  | .....\$375 |
| 6E  | .....\$299 |
| 4E  | .....\$285 |

|                 |               |       |
|-----------------|---------------|-------|
| <b>Addonics</b> | C143 NI .28dp | \$298 |
|                 | C142 I .28dp  | \$255 |

## TAPE BACKUP

|                        |              |
|------------------------|--------------|
| Colorado 120MB (DJ-10) | ..\$145      |
| 250MB (DJ-20)          | ..\$185      |
| Tape                   | .....\$19.99 |

## KEYBOARD

|                      |              |
|----------------------|--------------|
| Keyboard w/Trackball | ..\$65       |
| Focus 9000/8000      | .....\$79/42 |
| Omni Ultra           | .....\$95    |
| Omni 101 /102        | .....\$65    |
| Fujitsu 4700/4850    | .....\$45/32 |
| Keytronics 101       | .....\$35    |
| Maxi 101             | .....\$33    |
| Click 101            | .....\$26    |
| BTC 5339SX 101       | .....\$21    |
| BTC 5100 Small Size  | .....\$34    |

## MOUSE & TRACKBALL

|                                    |           |
|------------------------------------|-----------|
| Pen Mouse                          | .....\$22 |
| Easy Mouse                         | .....\$12 |
| Logitech Serial and Bus Port Mouse | .....\$65 |
| Logitech First Mouse               | .....\$37 |
| Microsoft Mouse                    | .....\$89 |

## MAKE YOUR OWN SYSTEM

We'll make your system work.  
Give us your configuration,  
we build it for you.

### NOTEBOOK

|                         |             |
|-------------------------|-------------|
| 486DX-33                | .....\$1460 |
| * 4MB RAM up to 20MB    |             |
| * SVGA DISPLAY /2S/P    |             |
| * 1.44MB FDD/ TrackBall |             |

### VIDEO CARD

#### VESA Local Bus :

|                                      |            |
|--------------------------------------|------------|
| ATI VLB w/2MB                        | .....\$335 |
| Diamond Viper 2MB                    | .....\$389 |
| Orchid P 9000 VLB                    | .....\$389 |
| Orchid Celsius VLB                   | .....\$209 |
| Orchid Fahrenheit 1280+              | .....\$155 |
| Genoa                                | .....\$115 |
| Cirrus logic w/1MB upgradable to 2MB | .....\$89  |
| ET 4000 w/1MB                        | .....\$80  |
| ET 4000 W32 w/1MB                    | .....\$105 |

#### ISA:

|                                     |              |
|-------------------------------------|--------------|
| Orchid Fahrenheit 1280 w/1MB-V      | \$189        |
| Orchid Fahrenheit w/1MB DRAM        | ..\$140      |
| Paradise clone SVGA /1MB            | .....\$72    |
| w/window accelerator                | .....\$89    |
| Trident SVGA w/1MB/512K             | .....\$59/35 |
| VGA w/256K                          | .....\$27    |
| MGP w/ Printer Port                 | .....\$15    |
| Cirrus 1MB w/Win accel./16.5M Color | \$69         |

### CASE

|                             |                 |
|-----------------------------|-----------------|
| Dual Fan Full Tower 230W UL | \$149           |
| 250 / 300W UL               | .....\$154/175  |
| 10 Bay Full Tower 230/300W  | .....\$109/133  |
| 9 Bay Full Tower 250/300W   | .....\$109/123  |
| 8 Bay Mid Tower 230W        | .....\$75       |
| 5 Bay Mini Tower 200W       | .....\$55       |
| Baby AT /230W Pwr           | .....\$59       |
| External FDD/HDD Case       | .....\$79       |
|                             | ...../\$129/149 |

### POWER SUPPLY

|                   |           |
|-------------------|-----------|
| 300W UL for Tower | .....\$69 |
| 250W UL           | .....\$54 |
| 230W UL           | .....\$49 |
| 230W UL PS-2      | .....\$43 |
| 200W UL XT Size   | .....\$45 |

### BLK CASE, KB, & MOUSE

|                                     |                |
|-------------------------------------|----------------|
| <b>Black</b> Full Tower 250W        | .....\$135     |
| Mid Tower 250W                      | .....\$119     |
| Mini Tower 200W                     | .....\$77      |
| <b>Black</b> BTC Keyboard           | .....\$33      |
| BTC 5100 Small                      | .....\$36      |
| <b>Black</b> Mouse                  | .....\$17      |
| <b>Black</b> Monitor 1024x768 .28dp |                |
| Interlaced/Non-Interlaced           | .....\$285/315 |

### MODEM

|                             |            |
|-----------------------------|------------|
| 2400 B Modem                | .....\$32  |
| 2400/9600 Fax /Modem        | .....\$59  |
| 2400/9600 Fax /Modem Pocked | ..\$99     |
| 9600/9600 Fax /Modem        | .....\$159 |
| 14400/14400 Fax /Modem      | .....\$169 |

Prices are subject to change without notice.  
Freight and labor are not refundable including reject.

## MOTHERBOARD

### MICRONICS EISA VESA

Built-in IDE w/I/O, w/ZIF socket, w/256K & CPU, Cont. 2.88 FDD  
486DX-33 .....\$905  
486DX2-50 .....\$999  
486DX2-66 .....\$1105

### VESA Local Bus Board

**Micronics** w/CPU /IDE I/O  
486DX2-66 /256K ..\$830  
486DX-33 /256K .....\$615

**Orchid** w/CPU 256K Cache  
486DX-33/50 ....\$479/639  
486DX2-66 .....\$689

### VLB (OEM by IBM)

486SLC2-50

w/CPU 64K Cache...\$295

**Free** OEM for ( Genoa )  
no CPU /256K .....\$145  
w/ ZIF Socket .....\$155

### WS CONTROLLER

|                             |              |
|-----------------------------|--------------|
| *FIS                        | .....\$85.00 |
| 7SCSI/CD-ROM/2IDE HD/4FD    |              |
| *SUPER IFSP2                | .....\$79.00 |
| 2HD/4FD/3S(2 16550)/2P/S    |              |
| *IDE2                       | .....\$49.00 |
| 2HD CO-EXIST:               |              |
| MFM,RLL,ESDI,SCSI           |              |
| *IDE4A-2.88                 | .....\$45.00 |
| 2HD/4FD SUPT. 2.88FDD       |              |
| *IDE8-2.88                  | .....\$85.00 |
| 4HD/4FD SUPT. 2.88FDD       |              |
| CO-EXIST: MFM,RLL,ESDI,SCSI |              |
| *IDE8                       | .....\$65.00 |
| 4HD/4FD CO-EXIST:           |              |
| MFM,RLL,ESDI,SCSI           |              |

### CONTROLLER

KW VLB IDE w/2 Hi-speed  
Serial/parallel Supt. 2.88 ...\$75  
Winbond VLB IDE I/O .....\$37  
DTC VLB IDE I/O .....\$79  
IDE 4F/2H/2S/P .....\$39  
IDE 4F/2H .....\$32  
IDE 2F/2H/2S/P/G .....\$17  
IDE 2F/2H .....\$12

### I/O CARD

|                         |           |
|-------------------------|-----------|
| High Speed 2S/P/G       | .....\$45 |
| High Speed 16550 2S/P/G | ..\$55    |
| 2S/P/G                  | .....\$15 |
| 2S/2P                   | .....\$22 |
| Serial                  | .....\$10 |
| Printer                 | .....\$9  |
| Game                    | .....\$11 |

### PRINTER

Canon BJ - 5.....\$185

|                            |         |
|----------------------------|---------|
| Panasonic KX-2123          | ..\$189 |
| KX-1124i                   | ..\$209 |
| KX-1123                    | ..\$165 |
| 2nd Inventory 2yr warranty |         |

### AMI EISA VESA BOARD

w/ZIF & w/math-co socket, memory up to 256MB  
486-33 w/256K, CPU ....\$849  
486-50 w/256k, CPU ....\$999  
486DX2-66 /256k,CPU ..\$1079

### TSL EISA VESA BOARD

486DX/DX2-256K W/O/CPU  
3-EISA/3-ISA/2-VESA Slot  
Main Board .....\$215

### ISA BOARD

486DX/DX2 Main Board  
(OPTI) w/128K no CPU \$95  
486 SX-33 /64K w/CPU ....\$285  
3486 Board w/128k 386-40 CPU  
Upgradable to 486 .....\$165  
386SX-33 w/ CPU .....\$89  
386SX-40 w/ CPU .....\$105

### HARD DISK

|               |                   |            |
|---------------|-------------------|------------|
| <b>Maxtor</b> | 345MB             | .....\$289 |
|               | 245MB             | .....\$225 |
|               | 130MB             | .....\$175 |
| <b>Conner</b> | 80MB              | .....\$159 |
|               | 60MB              | .....\$125 |
|               | SCSI 676MB Maxtor | ..\$949    |

### FLOPPY DRIVE

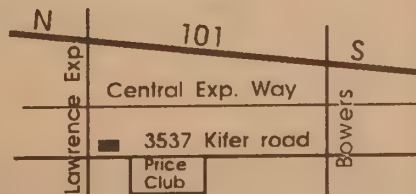
|                     |           |
|---------------------|-----------|
| Teac Combo 1.2&1.44 | ..\$125   |
| Teac 2.88MB         | .....\$88 |
| Toshiba 2.88MB      | .....\$58 |
| Teac 1.2 MB         | .....\$48 |
| Teac 1.44 MB        | .....\$38 |
| Mounting Kit        | .....\$4  |

### HOT CD TITLES

|                          |           |
|--------------------------|-----------|
| * Space Quest IV         | .....\$37 |
| * Dinosaur Adventure     | .....\$40 |
| * Family Choice          | .....\$35 |
| * Family Doctor          | .....\$31 |
| * Comptons MPC Encly     | ..\$97    |
| * Carmen San Diego       | .....\$35 |
| * Animals V1.0           | .....\$27 |
| * Jones in Fast Lane MPC | \$31      |
| * King's Quest V         | .....\$31 |
| * Kodak Photo CD Access  | \$30      |
| * Mayo Clinic Family     | .....\$35 |
| * Mixed up Mother Goose  |           |
| MPC, Dos                 | .....\$35 |
| * Monkey Island          | .....\$32 |
| * Sherlock Holmes        | .....\$23 |

### CD ROM DRIVE

|               |            |
|---------------|------------|
| Panasonic 522 | .....\$215 |
| 562           | .....\$255 |





# BUSINESS SOLUTIONS

management program. He proposes that Suishi lease the software for an annual fee. As part of the license fee, Xavier provides support and annual updates. A relevant factor in terms of the tax implications of the licensing agreement is that Corporation X++ assumes the risk of getting the thing to work.

purchase that would depreciate slowly or not at all.

They enter into a software licensing agreement for an annual fee of \$30,000.

Prior to the Tax Reform Act of 1986, this type of deal would not have flown. The IRS would have made Corporation X++ subject

included. A typical software company's income is tainted because, as with Corporation X++, the software is almost always licensed rather than sold outright.

## ANY PORT IN A STORM

Fortunately, Congress decided to give a break to developers of computer software, because the penalty tax wasn't really intended for them in the first place. The PHC tax was designed to catch the so-called "incorporated pocketbook": an investor trying to avoid individual income taxes by sheltering investments such as stocks and bonds in a corporation, thus taking advantage of lower corporate tax rates.

The tax break available to software developers is in the form of a "safe harbor," whereby certain software royalties are not considered PHC income. Such royalties are considered untainted if they meet the test for being "active computer business software royalties." If you fail the test, the income is tainted and you may not be

---

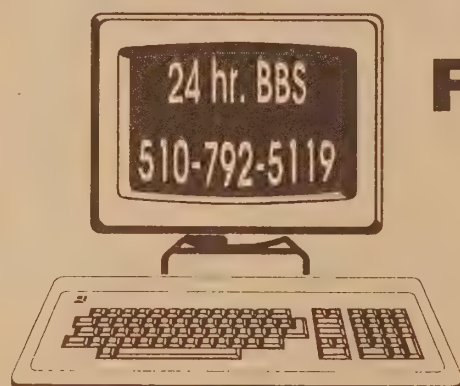
**The tax break available to software developers is in the form of a "safe harbor," whereby certain software royalties are not considered PHC (personal holding company) income.**

---

While Corporation X++ could sell the software outright, Xavier would rather lease it than abandon all his equity in its development. At any rate, Suishi prefers a license arrangement rather than an outright purchase on the insistence of its tax advisor, who determined that annual licensing fees are currently deductible, as opposed to a

to the punitive, personal holding company tax, a whopping 28% on top of its regular tax liability.

A personal holding company (PHC) is a closely held corporation (more than 50% owned by five or fewer shareholders), at least 60% of whose income is from "tainted" (passive) sources, of which royalties may be



## FRED HANEY & SONS COMPUTER CO.

**For The Best Possible Up  
To Date Pricing, Call One  
of The Following:**



**FAX-BACK Price Sheet by Voice Request 510-792-7185**

**OEM & Dealers Welcome**

**See The Newsletter On Our BBS 510-792-3443**

***We Offer the highest Quality Computer Products  
at the Best Prices. We're here to service all your  
Computer Needs, Today and Tomorrow!***

**37416 Joseph Street, Fremont, CA \* Voice (510) 792-3505 FAX (510) 792-5678**



# GOLDEN MICRO

COMPUTERS

BEST SERVICE  
IN TOWN

OPEN 7 DAYS

**5 Years Labor Warranty**  
**1 Year Parts Warranty**  
**Extended Warranty Available!**

## EVERY SYSTEM INCLUDES:

1 MB RAM, 120MB IDE Hard Drive, SVGA Monitor (1024x768, .28dp) & 1MB SVGA Card, 2 Teac Floppy Drives (1.2 & 1.44MB), IDE/IO Card, 2 serial, 1 parallel, and 1 game ports, 101 Enhanced Keyboard, Minitower or Desktop Case with Power Supply.

## SYSTEM UPGRADES:

Add \$30 for 256K cache • Add \$120 for EISA Systems  
Add \$60 for Local Bus System (Includes VGA & IDE Interface)

### VESA Local Bus 486DX 64K DX2-66/DX-50 DX2-50/DX-33 COMPLETE SYSTEMS

• 1MB RAM exp to 32MB  
• 8K Internal Cache  
• Shadow RAM  
Landmark speed:  
220/167/167/151 MHz

**\$1289/1259**  
**\$1169/1069**

### 486DX 64K DX2-66/DX-50 DX2-50/DX-33 COMPLETE SYSTEMS

• 1MB RAM exp to 32MB  
• 8K Internal Cache  
• Shadow RAM  
Landmark speed:  
220/167/167/151 MHz

**\$1239/1189**  
**\$1099/1009**

### 486SX 64K SX-25/SX-20 SLC-33/25 COMPLETE SYSTEMS

• 1MB RAM exp to 32MB  
• 8K Internal Cache  
• Shadow RAM  
Landmark speed:  
112/90/90 MHz

**\$829/829**  
**\$809/789**

### 386DX 64K 40/33/25 COMPLETE SYSTEMS

• 1MB RAM exp to 32MB

• Shadow RAM

Landmark speed:

65/55/41 MHz

**\$769/759**  
**\$739**

### 386SX 40/33/25 COMPLETE SYSTEMS

• 1MB RAM exp. to 16MB

• Shadow RAM

Landmark speed:

43/34/23 MHz

**\$729/719**  
**\$709**

## CASE & POWER SUPPLY

Minitower w/200 Watt .....\$48  
Desktop w/200 Watt .....50  
Mid Tower w/230 Watt .....75  
Full Tower w/250 Watt .....99  
200/230 Watt power supply ....30/33  
230/250 Watt power supply .39/41

## VGA CARDS

EGA/VGA (8 Bit) .....\$16  
VGA 800x600, 256K .....24  
Oak 1MB .....48  
Trident (8900CL) 1MB .....53  
Tseng ET 4000 .....74  
SpeedStar 24X .....169  
Oak 1MB WIN ACC (ISA) .....59  
Fahrenheit 1280  
Win Acc (ISA) .....139  
Fahrenheit 1280  
Win Acc (VESA) .....149

## ADD ON CARDS

MGP .....\$14  
Super I/O (16550) .....29  
I/O (2s, 1p, 1g) .....13  
IDE I/O (2s, 1p, 1g) .....14  
4 Floppy controller .....25  
SCSI + IDE (16 Bit) .....58  
Ethernet (8 Bit/16 Bit) .....50/60  
10 Base-T (16 Bit) .....65  
MFM Controller .....25  
ESDI Controller .....39

## PRINTERS

Panasonic 1180 .....\$155  
Panasonic 1123 .....185  
Panasonic 1124i .....285  
Panasonic 1164 .....365

## FLOPPY DRIVES

Teac 1.2MB 5.25" .....\$45  
Teac 1.44MB 3.5" .....39

## MISCELLANEOUS

387SX25/16 Math Co .....\$61/59  
387DX-40/33 Math Co .....69/65  
MS mouse (OEM) .....40  
Mouse (Ledgen) .....11  
Mouse (Keen/Agile) .....9  
Logitech MouseMan (OEM) ...40  
Power Center .....15  
TV Turner .....139  
Gallant Sound Card SC5000/  
SC4000/SC3000 .....119/89/69  
Sound Pro Speakers .....19

## CD ROM

Sony CDU31A .....\$165  
Mitsumi .....165

## KEYBOARDS

101 Enhanced .....\$18  
Maxiswitch .....29  
Keytronic .....30

## MODEM

2400 Baud Internal .....\$25  
9600/2400 Fax/Modem .....45  
9600 Modem External .....169  
14,400 Fax/Modem Int. ....139

## MOTHERBOARDS & CPU

286-12/16 .....\$30/40  
386SX-25/33/40 .....60/70/80  
386DX-20 .....79  
386DX-33 64K .....115  
386DX-40 64K .....119  
486SX-25/33 (CYRIX) ....119/139  
486SX-25 NC .....139  
486SX-25 64K .....179  
486DX-33 64K .....349  
486DX2-50 64K .....399  
486DX-50 64K .....479  
486DX2-66 64K .....559

## TAPE DRIVES

120 MB Colorado .....\$160  
250 MB Colorado .....199

250 MB Archive .....149  
120 MB/250 MB Tape .....20/23

## MONITORS

12"/14" Mono (refurbished) ..\$45/55  
12"/14" Mono .....\$65/85  
14" Mono VGA .....99  
14" SVGA (.39) .....189  
14" SVGA (.28) .....229  
14" Non-Int SVGA .....259  
14" Microscan 3E+ .....329  
15" Microscan 4F .....429

## HARD DISK

40 MB Conner .....\$119  
80 MB Conner .....149  
120 MB Conner/Maxtor .....159  
127 MB Quantum SCSI .....149  
170 MB W.D./Conner .....169  
245 MB Maxtor/Conner .....229  
340 MB Maxtor .....299  
540 MB Conner .....559

## PC Repairs & Upgrades Welcome

46560 Fremont Blvd, Suite 408

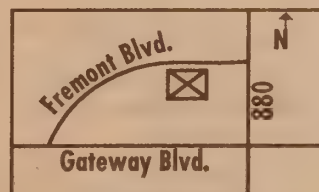
Fremont, CA 94538x10) 623-0321

**(510) 623-0866**

Hours M-F 9-6 Sat/Sun 10-4 ATM

Prices subject to change without notice. Not responsible for typographical errors.

**GOLDEN  
MICRO**  
COMPUTERS





# MEMORY

We Buy and Sell DRAM, SIMM, SIPPS  
At Very Good Prices, IBM Compatible & APPLE  
Call For Latest Prices & Availability

**COMPAQ**  
PARTS & ACCESSORIES  
**30% OFF**

**apple**  
LOWEST PRICES  
ON MEMORY!

**IBM & COMPATIBLES**  
LOWEST  
MEMORY  
PRICES

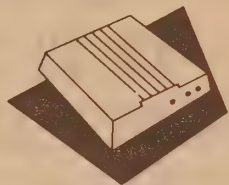
**WE CERTAINLY WELCOME  
OEM & RESELLERS**

- WE BUY SCRAP BOARDS w/MEMORY or CPU's...TOP PRICES!!
- WE ARE LOOKING FOR USED 1MBx1,80/70/60ns DIP's

**CGI TECHNOLOGY**

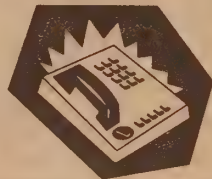
**CALL FOR LOWEST  
GUARANTEED PRICE!  
(408) 973-9840  
Fax: (408) 973-8710**

**It's a FAX.**



**It's a MODEM.**

**It's VOICE MAIL.**



**It's a RECORDER.**

**It's a DEAL.**

NEVER BEFORE has a single board communicated in so many different ways. Yet, despite all its sophistication, the TyIN 2000 board is easy to install. And with its Windows user interface, it's even easier to use. With just one phone line, it automatically switches calls between fax, modem and voice mail. Plus, it's the first board to offer a built-in recorder, so now you can attach recorded messages to your documents—including the ones you plan to fax. And it even guarantees true background operation, without tying up your PC.



**\$199**  
MFG. SUG.  
PRICE

**TyIN 2000™**  
PC COMMUNICATIONS CENTER



The TyIN 2000 board requires an AT-compatible system.

|                     |              |
|---------------------|--------------|
| CompUSA San Bruno   | 415-244-4700 |
| CompUSA Sacramento  | 916-648-3662 |
| CompUSA Santa Clara | 408-345-4100 |
| Fry's Fremont       | 510-770-3797 |
| Fry's Campbell      | 408-364-3700 |
| Fry's Sunnyvale     | 408-733-1770 |

|                  |              |
|------------------|--------------|
| Fry's Palo Alto  | 415-496-6000 |
| JDR Microdevices | 408-559-7724 |
| Access Computers | 408-247-4444 |

For additional dealers in your area, please call:  
**800-272-9959**

## BUSINESS SOLUTIONS

able to take advantage of the low corporate income tax rates.

To oversimplify the definition, "active computer business software royalties" are any royalties received in connection with the licensing of software by a corporation when these four criteria are met:

1. The royalties are received by a corporation actively developing or producing computer software;
2. The royalties constitute at least 50% of the corporation's income;
3. The corporation's software business and deductible research expenditures (excluding personal service payments to the five largest shareholders), or the five-year average of those expenses, equals at least 25% of the corporation's overall income; and
4. To the extent that other tainted income exceeds 10% of the corporation's overall income, it must be paid out as a dividend.

This narrowly prescribed safe harbor is applied ruthlessly. If you fall short of a percentage, even by a hair, you're shaved. If, for example, a company sells bundled software; i.e., both hardware and software sold as part of one package, it is all treated as a hardware sale. You might therefore flunk the 50% test because you didn't distinguish the cost of hardware from software on the invoice.

Suppose Perrini, Inc. produces an editing machine consisting of a PC, a modified keyboard, and software. Perrini should consider selling the hardware separately from the software, to avoid it all being treated as the sale of hardware.

The requirement that the corporation must actively develop the software precludes a strategy of developing the software and then transferring it into a newly formed corporation. In that case, you, not the corporation, would be in the business of developing software. On the other hand, if the corporation is already in the development business, the mere fact that certain software has been transferred to it shouldn't defeat this safe harbor.

Even if you don't think you can qualify, a little creative tax planning might save your assets. The safe harbor applies to all members of an "affiliated group," as long as even one member of the group meets the safe harbor criteria. Suppose, for example, that only 40% of Perrini's income is from software licensing; most is from hardware. Perrini flunks the 50% test. But Perrini, Inc. could restructure, splitting into two corporations: Perrini Hardware, Inc. and Perrini Software, Inc. Because both are part of an affiliated group (they have the same owners), Perrini Hardware is off the hook as long as Perrini Software qualifies.



# 3 REASONS TO BUY FROM MEDIA VALUE.

## •PRICE

We will match or beat  
our competition everytime.

## •SERVICE

Orders received by 2pm  
are shipped same day

## •QUALITY

Meets / exceeds  
quality standards

# MEDIA VALUE

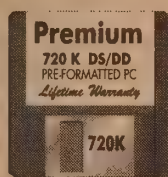
1-800-845-3472 OR 1-800-200-0020

- Free Next Day Delivery For Local Bay Area Accounts - \$5K + Orders
- Corporate, Government & Education Purchase Orders Welcomed
- 100% Guaranteed

**Free Software**

For orders of \$150 receive  
a \$99.95 valued Action Plus  
Lite Software Program.

## HOT 3.5" PRICES



**34¢**

Bulk Unformatted - 27¢  
Shipping: \$1.20 per 50  
3.5" User Labels - 3¢ Each  
Mac Format Add 5¢



**25¢**

**PRELABELLED  
UNFORMATTED**



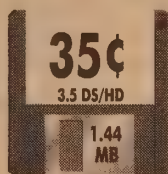
**29¢**

**NO LABEL  
UNFORMATTED**



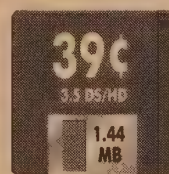
**43¢**

Priced in  
Lots of 1000  
Each in Lots of 500 - 49¢  
Each in Lots of 100 - 50¢  
Bulk Unformatted - 44¢



**35¢**

**PRELABELLED  
UNFORMATTED**

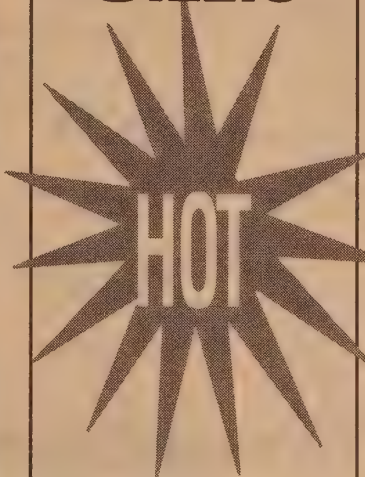


**39¢**

**NO LABEL  
UNFORMATTED**

MINIMUM ORDER 100

## Prices That Sizzle



**DISK/CD  
DUPLICATION  
AVAILABLE FOR  
QUOTE**

## HOT 5.25" PRICES

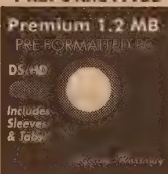
### PREFORMATTED



**21¢**

Priced in Lots of 1000  
22¢ Each in Lots of 500  
23¢ Each in Lots of 100  
Shipping: \$1.20 per 100  
5.25" User Labels - 2¢ Each

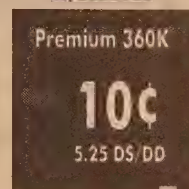
### PREFORMATTED



**27¢**

Priced in Lots of 200  
30¢ Each in Lots of 100  
31¢ Each in Lots of 50  
Shipping: \$1.20 per 100  
5.25" User Labels - 2¢ Each

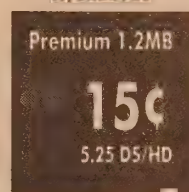
### PRE-LABELLED UNFORMATTED W/SLEEVES



**10¢**

5.25 DS/DD

### PRE-LABELLED UNFORMATTED W/SLEEVES



**15¢**

5.25 DS/HD

## International Inquiries Welcome

### PREMIUM WHITE BOXED DISKETTES

Shipping: 30¢ Each:

|             |                       |        |
|-------------|-----------------------|--------|
| 3.5" DS/DD  | Box of 10             | \$3.60 |
| 3.5" DS/HD  | Box of 10             | 5.85   |
| 5.25" DS/DD | Box of 10/Lots of 100 | 2.35   |
| 5.25" DS/HD | Box of 10             | 3.35   |

*Lifetime Warranty*

|                                   |      |
|-----------------------------------|------|
| HEAD CLEANING KITS for 3.5 & 5.25 | 2.99 |
| DISKETTE MAILERS                  | CALL |
| 8 MM CLEANING CARTRIDGE           | 9.99 |

### BULK DISKETTES

|                   |        |     |
|-------------------|--------|-----|
| 5.25" DS/DD       | 360K   | 18¢ |
| 5.25" DS/HD       | 1.2 MB | 24¢ |
| 5.25" DS/DD COLOR | 360K   | 29¢ |
| 5.25" DS/HD COLOR | 1.2 MB | 44¢ |

Shipping: \$1.20 per 100 Disks:

### Premium Data Cartridges 15% OFF LIST!

|                             |         |         |
|-----------------------------|---------|---------|
| Shipping: 60¢ Each:         | 2.9     | 10+     |
| DC600A for 60 MB (Generic)  | \$16.99 | \$15.99 |
| DC6150 for 150 MB (Generic) | 17.99   | 16.99   |
| DC6250 for 250 MB (Generic) | 21.99   | 20.99   |
| 4mm DAT & 8mm               | CALL    | CALL    |
| CALL FOR BRAND NAME QUOTES  |         |         |

**FAX ORDERS: (408) 727-3155**  
**CUSTOMER SERVICE: (800) 354-3798**

Visa & MasterCard accepted with no surcharge. We check for and report credit card fraud! ☐ C.O.D. add \$5.00 ☐ Handling charge is \$3.75 per order to cover order processing, packing, etc. ☐ Shipping charges for the continental U.S. are listed with each item. APO/FPO, Canada, and P.O. Box orders add an additional 20% of purchase price. Shipments to AK, HI, PR are by air only ☐ California residents add 8.25% sales tax. No tax outside of California ☐ Purchase orders will be accepted on a Net 30 day basis from Educational Accounts, Federal and State Government Agencies with minimum initial order size of \$150. Corporate accounts welcomed call for details. ☐ Products, price and availability are subject to change without notice.

\* Cashiers check and money orders will ship upon receipt - Personal checks add 10 days.

### PRINTER RIBBONS

Long Lasting OEM Quality

| Shipping: \$3.00/Dozen or Fraction | List Price | Media Value |
|------------------------------------|------------|-------------|
| Apple Imagewriter I, II            | 7.00       | 1.65        |
| Apple Imagewriter 4CLR             | 13.00      | 5.17        |
| Citizen 120D/GSX140                | 7.00       | 2.55        |
| Diablo Hytype II M/S               | 6.50       | 1.99        |
| Diablo Hytype II NY                | 6.50       | 1.99        |
| Epson FX/RX/MX 70/80               | 6.00       | 2.15        |
| Epson LQ 500/800/850 NY            | 10.50      | 2.19        |

|                            |       |       |
|----------------------------|-------|-------|
| Genicom 3000, 136 COL      | 18.00 | 13.95 |
| IBM Proprinter 4201        | 11.50 | 2.96  |
| IBM Proprinter 4202        | 10.65 | 3.55  |
| NEC P5200 W/loop NY        | 13.50 | 5.15  |
| NEC Spinwriter 3500        | 5.40  | 5.40  |
| Panasonic 1080/1090 Welded | 14.70 | 4.90  |
| Panasonic KX-1624          | 13.50 | 6.95  |
| Radio Shack VI/VII NY      | 9.75  | 2.97  |
| Star Micronics NX2400      | 8.00  | 2.67  |
| Star Micronics NX1000      | 7.49  | 2.49  |

\* Minimum order 6

Plus 100's More

Printer ribbon brands too numerous to list...Call us for prices!

Complete Steps 1-5 and Mail To: Media Value • 4251 Burton Dr. • Santa Clara, CA 95054

#### 1 SHIP TO STREET ADDRESS:

Name \_\_\_\_\_ Company \_\_\_\_\_  
Address (no P.O. boxes) \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Day Phone \_\_\_\_\_ Eve Phone \_\_\_\_\_

#### 2 METHOD OF PAYMENT: \*

☐ Check/Money Order Enclosed ☐ C.O.D.

☐ VISA ☐ MasterCard

CARD NUMBER \_\_\_\_\_  
\_\_\_\_\_

SIGNATURE - MUST ACCOMPANY ALL ORDERS \_\_\_\_\_

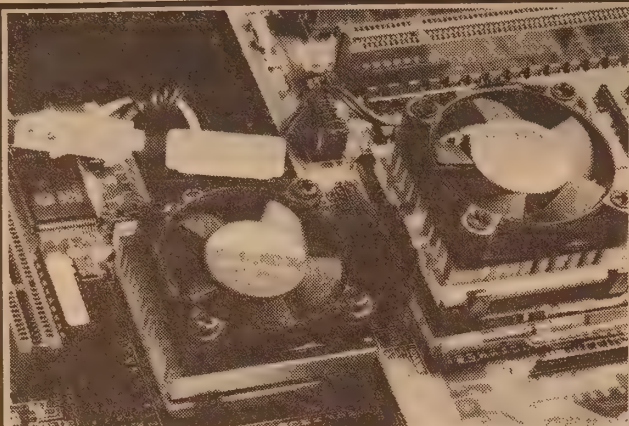
CARD EXPIRES \_\_\_\_\_

#### 4 DESCRIPTION & PRICE OF ITEMS TO ORDER:

| QTY | COMPLETE DESCRIPTION (Brand, Size, Color, Density) | UNIT SHIPPING | SHIPPING TOTAL | UNIT PRICE | TOTAL PRICE |
|-----|----------------------------------------------------|---------------|----------------|------------|-------------|
|     |                                                    |               |                |            |             |
|     |                                                    |               |                |            |             |
|     |                                                    |               |                |            |             |
|     |                                                    |               |                |            |             |

|                                                                                                           |                                 |          |                |             |       |           |
|-----------------------------------------------------------------------------------------------------------|---------------------------------|----------|----------------|-------------|-------|-----------|
| 5 MERCH TOTAL                                                                                             | SHIP TOTAL                      | HANDLING | COD ADD \$5.00 | .825 CA TAX | OTHER | TOTAL DUE |
| Sub-Total from 'TOTAL PRICE'                                                                              | Sub-Total from 'SHIPPING TOTAL' | \$3.75   |                |             |       |           |
| Must be added to all orders. Add only if COD. California Only. Overseas, 2nd Day Air, etc.—Call for info. |                                 |          |                |             |       |           |





## 486DX CPU Cooling Fan

- Special Design Allows 2 Different Ways Of Installation  
Installation is as easy as "snapping it on"  
Can be used with ZIF Socket by reversing clip!
- UL Approved Fan
- Quiet Operation Fan

**SAVE UP TO 40%!**

| QTY 1-2        | 3-5            | 6-10          | 11-19         | 20-49         | 50-100        |
|----------------|----------------|---------------|---------------|---------------|---------------|
| <b>\$15.00</b> | <b>\$13.00</b> | <b>\$9.00</b> | <b>\$8.25</b> | <b>\$7.25</b> | <b>\$7.00</b> |

**IM-LINK CORP.**

2827 Whipple Road • Union City, CA 94587  
Tel: (510) 489-2681 Fax: (510) 489-2666

## BUSINESS SOLUTIONS

### THE CORPORATE WORLD IS WONDERFUL

If Corporation X++ passes the "active computer business software royalties" safe harbor test and licenses its software to Suishi, tax consequences will be especially favorable. For one, the corporation will be subject to a maximum tax rate of only 15% on its first \$50,000 of income. And, the corporation's income is not subject to employment taxes. The corporation may thereby amass a substantial nest egg at a minimum tax cost.

If this sounds like getting away with tax murder, Congress agrees. There are limits to how much wealth a corporation can accumulate before being subject to an accumulated earnings tax. Essentially, this is a penalty imposed on corporations that keep their earnings rather than pay them out, usually by means of dividends or salary.

Suppose Corporation X++ pays Xavier no salary, even after he signs on several licensees. Within several years, the corporation would accumulate hundreds of thousands of dollars of cash, initially taxed at very low rates. The corporation doesn't need to hold on to all this money for its reasonable business needs. But Xavier wants to keep the money in the corporation because when it's distributed to him, he'll be smacked with a big taxable income.

The accumulated earnings tax, in effect, forces such "incorporated pocket-books" to distribute earnings that exceed reasonable business needs. Fortunately, a corporation is automatically allowed to accumulate up to \$250,000 (\$150,000 for personal service companies), whether it needs it or not. Even with this allowance, Xavier can defer tens of thousands of dollars of income tax before the jig is up. He might even be able to set his salary low enough to permanently escape a sizable chunk of Social Security taxes.

If you have access to a law library, a succinct yet informative article on the personal holding company tax is "The Accumulated Earnings Tax," 24 *Tax Advisor* 143 (March 1993). (Or, call my office for a copy. Reprint with permission of the publisher, the American Institute of Certified Public Accountants).

In these simplified examples, the revenue takers took Eddy to the cleaners while Xavier came out untouched. In real life, of course, Eddy's accountant would save him from his primal urge to incorporate. ■

*The authors and editor assume no responsibility for use or content of this article. Your professional tax or legal advisor should be consulted on such matters as they apply to your situation.*

HARVARD

EVERNET

M.I.T.

C.N.E.

→ PH.D.

→ M.B.A.

## MAKE THE OBVIOUS CONNECTION

If you are looking for the best way to learn all about the Novell Certified NetWare®

Engineer degree, make it simple on yourself - call the leader - Evernet Education

Services. Evernet Education is the most highly respected national LAN

training company. Why? One reason is that

we are part of Control Data Systems Inc. - the

nation's premiere integration company. So

you know you are getting instructors who

bring the experience gained in thousands of

successful installations into classrooms that are

furnished with the finest equipment available.

Call today for all the details on the great new things

that are coming up in this year.

We're so sure that you will get the finest training anywhere, we offer this guarantee on all of our courses. If an Evernet student fails to pass any of the certification testing, we welcome them back to review the appropriate course at no additional cost.

**GUARANTEED  
CONTROL DATA  
SATISFACTION**



**CALL TODAY 1-800-447-3658**

**EVERNET**

**EDUCATION SERVICES**  
A Division of Control Data Systems Inc.

Los Angeles • San Francisco • Sacramento • Chicago



# TANSTAFL

DIFFICULT TO SAY - EASY TO USE - ECONOMICAL TO BUY

NETWORKING

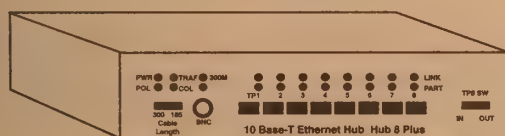
SINCE 1978



## REPEATERS

### Ethernet Repeaters

- BNC and AUI connectors for each port.
  - Activity and Partition indicators for each port.
  - Automatic preamble generation.
  - Auto partitioning on Net failure.
  - Traffic and collision indicators.
- #ETMPR2 2 port repeater — \$379  
#ETMPR4 4 port repeater — \$549



## HUBS

### 9 Port Concentrator

- 8 UTP ports, 1 BNC port.
- Full diagnostic LED's for link integrity, Partition, Activity, Collision, Reverse Polarity, and BNC 300M.
- Supports 185 and 300 Meter Thin Coax.
- Low Cost!

ER5390 Sale Priced @ - \$229

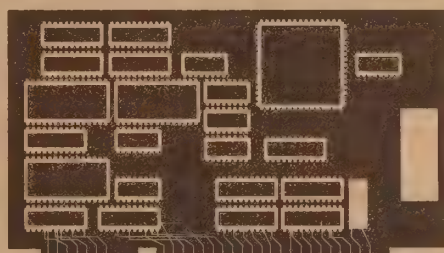
### 14 Port Concentrator

- 12UTP, 1 BNC, 1 AUI ports (10 Base 2/5T)
- Status LED's for traffic, collision, fifo error, MAU lockup, partition, and twisted pair link.
- Rack mountable.
- Crossover UTP port for linking to other Hubs.

#HUB-II Sale Priced @ - \$595

#ER6391 — \$495

same as above W/O cross over



## PC INTERFACE CARDS

### 8 Bit 10 Base T

- Novell NE1000 compatible
- Multi Packet Buffer
- Very low cost

#1000T on Sale @ — \$55

### 8 Bit Coax

- Novell NE1000 compatible
- BNC and AUI connectors
- 8K Multi Packet Buffer

#1000C on Sale @ — \$55

### 16 Bit 10Base T

- NOVELL LAB CERTIFIED
- Novell NE2000 Compatible
- Status LED's and lots more

#2000T on Sale @ — \$59  
Lifetime Warranty

### 16 Bit Coax

- Netware, PC/tcp, PC-NFS, NCSA, NDIS Compatible

### •NOVELL LAB CERTIFIED

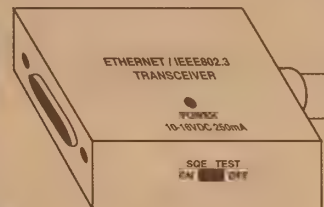
- BNC and Coax connectors

#2000C on Sale @ — \$59  
Lifetime Warranty

## LOW COST INTERFACE CARDS

- 32Bit VESA LOCAL BUS COMBO
- BNC, VTP, AVI
- 50MHz SPEED LOCAL BUS IT SCREAMS!
- INTEL 82586 CA Controller
- Netware ODI, SCO, UNIX & NDIS drivers

Priced well below market value — \$379



## TRANSCEIVERS

### 10 Base T MAU

- Complete AUI to UTP Link
- Selectable Link and SQE tests
- 6 Status LED's

#2010-TP Sale Priced @ — \$48

### 10 Base 2 Coax MAU

- Complete AUI to Thin Ethernet transceiver
- Selectable SQE test
- up to 600M without a repeater

#2010-BNC Sale Priced @ — \$48

### FOIRL MAU

- Its loaded call for details

#ET-300F — \$395



## POCKET ETHERNET ADAPTERS

### 10 Base 2/T

- Compatible with Net Ware, TPC/IP, and PC-NFS!
- Diagnostic Leds for Power/Xmit and Host activity

LS8901 — \$149

### 10 Base T

- Compatible with Net Ware, LANtastic, TCP/IP, and PC-NFS
- Diagnostic Leds for Power/Xmit and link/rev, collision, and Jabber

#PE300T — \$159

## Miscellaneous Items

| 10 BASE 2 Cables     |                             | Qty 1   | Qty 10  | Qty 50  | Qty 100 | Qty 1000 |
|----------------------|-----------------------------|---------|---------|---------|---------|----------|
| R5810                | Patch Cable RG58U 10'       | \$4.80  | \$4.40  | \$3.90  | \$3.75  | \$3.60   |
| R5825                | Patch Cable RG58U 25'       | \$10.00 | \$9.25  | \$8.50  | \$7.50  | \$6.20   |
| R5850                | Patch Cable RG58U 50'       | \$18.00 | \$17.25 | \$16.50 | \$15.50 | \$14.50  |
| BC58                 | Patch Cable RG58U 1000'roll | \$68.00 | \$66.00 | \$65.00 | \$63.00 | \$62.00  |
| Connectors & Splices |                             |         |         |         |         |          |
| C58T                 | Connector Twist-On RG58     | \$2.25  | \$1.85  | \$1.15  | \$1.95  | \$1.90   |
| C58C                 | Connector Crimp-On RG58     | \$2.05  | \$1.75  | \$1.05  | \$1.95  | \$1.90   |
| TFFM                 | BNC Adapter T type M/F/F    | \$3.00  | \$2.40  | \$2.20  | \$1.60  | \$1.20   |
| OFF                  | BNC inline splice F/F       | \$1.20  | \$1.08  | \$1.00  | \$1.70  | \$1.60   |
| Term50               | 50 Ohm Terminator 1%        | \$3.00  | \$2.90  | \$2.50  | \$2.40  | \$2.10   |

## ECONOMICAL PRINTER AND PERIPHERAL SHARING



## LOWEST COST MULTI-PORT

- 4 serial and one parallel ports
- Easily share one or two printers
- Cables included for easy installation
- 256K Buffer memory expands to 1 Meg.

#PS-2 Reg. \$299

SALE PRICED AT — \$199



## 8 PORT SERIAL

- Supports 1 to 4 printers.
- 256K Buffer expands to 4 Meg.
- Cables included for easy installation
- 2 year warranty.
- XL-1 Reg. \$399

SALE PRICED@

\$299



## 8 PORT SER/PAR

- Available in any combination of serial or parallel ports.
- Expandable up to 56 ports.
- 256K Buffer expandable to 4 Meg.
- Too much more to list. Call for our catalog.

9 Combinations all Reg. \$895 SALE PRICED AT—\$495



Don Medley  
President and CEO

We are very proud of our "hard won" reputation for delivering outstanding values in high performance printer and peripheral sharing devices. Literally hundreds of our customers have called or written to tell us how easy our products are to install and to use. Perhaps a true measure of their performance and value is that we receive more orders from repeat customers and customer referrals than we do from our advertising.

We design, engineer, manufacture and quality assure our print and peripheral sharing devices. We design and quality assure our networking products to the same high standards, but to save our customers money this line is engineered and manufactured by others to our specifications and carries our same money back guarantee.

Our sales and technical staff will help you select the right combination of products to deliver the highest possible performance for the lowest possible cost. All Tanstaaf products carry are fully warranted for two full years from the date of your purchase and come with unlimited toll free technical support.

Please call us today, we look forward to serving you.

800-776-5676, FAX 408-748-9431, TEL. 408-748-9330



## Reengineering The Modern Office

*"American businesses plunked down well over \$1 trillion for computer systems in the last decade—yet they have almost no measurable productivity increase to show for it."*

—Michael Rothschild, *Forbes*, March 1993

**BY STEVE  
KAPLAN**

### RESOURCES:

**Keyfile Corp.**  
22 Cotton Rd.  
Nashua, NH 03063  
1-800-883-3800

**Lotus Corp.**  
PO Box 9175  
Cambridge, MA 02139  
(617)693-1750

Copyright © 1993 by Steve Kaplan. All rights reserved. Steve Kaplan is president of RYNO Imaging Systems. RYNO is a Novell Platinum dealer specializing in office automation. He can be reached at (707)746-6252.

In the factory, efficiency experts analyze every step of the manufacturing process to wring out the last drop of productivity. In the office, however, management typically takes employee time for granted, seldom quantifying, or even considering the expense involved in taking orders, filling out forms, and routing information among coworkers. Labor-intensive tasks including faxing, routing, filing, and copying occur without regard to their impact on the "bottom line."

Although the factory experienced a radical change in the early 1900s, the introduction of the electric motor and other new machines failed to produce the expected gains in output. In his now famous speech, "The Principles of Scientific Management," Frederick Winslow Taylor maintained that "there is a best way in doing everything" and advocated replacing trial-and-error methods with standards and guidelines.

Today Taylor's ideas are commonplace. Factories are models of efficiency that produce an increasing variety and quantity of goods with fewer people. A 1991 *BusinessWeek* survey showed factory productivity increasing by 53% since 1973. Over the same period, however, office productivity actually declined by 7%.

Recent articles in *BusinessWeek*, *Fortune*, *Forbes*, and *The Wall Street Journal* all show white-collar productivity as stagnant during the last decade.

The lack of gain in office productivity is especially surprising considering the advances in office technology. During the last few decades we've seen the introduction of the most powerful personal information tools since the phone: the copy machine, the fax machine, and, of course, the personal computer. The PC can make individuals more productive, but does not lend itself well to sharing information within an office. When combined with laser printers and copy machines, offices are quickly overrun by massive amounts of paper output. Office workers spend so much time shuffling paper and requesting information from each other that as a group, they fail to accomplish much more.

According to a study by Coopers & Lybrand reported in *Inc.* magazine, 7.5% of paper documents are lost in the average office and 3% of the remainder are misfiled. While it costs \$20 to file or retrieve a paper document, it costs \$120 to retrieve a misfiled document and \$250 to recreate a lost document. In her book, *Survive Information Overload: The 7 Best Ways to Manage Your Workload by Seeing the Big*

*Picture*, Kathryn Aslesandrini said the average executive wastes forty-five minutes a day searching for something lost on a desk.

A picture of a typical office worker might help illustrate how all of the new technology does not by itself increase our efficiency: This individual uses her PC to analyze expected demand, inflation trends, and forward-buy discounts. This information lets management maximize profits by maintaining optimal inventory levels. The process of sharing and gathering the information, a process also called workflow, though, is a nightmare—the sales department must continually be asked for updated forecasts, the manufacturing department checked for modification information, and the service department for performance histories. Purchase orders are printed, copied, and routed to the appropriate individuals for approval. Then cover sheets are written for the various documents and fed into the fax machine. Finally, after receiving the confirmation from the vendors the information is delivered to accounting. And of course, everything is copied and filed in each of the departments along the way.

### SOME PARTIAL SOLUTIONS

Local area networks have become a popular solution as PC users seek to efficiently access and work with growing amounts of digital information available in the office. Generally, network implementations fall into one of three scenarios:

1. "SneakerNet"—this may be the most common LAN in place today. They provide an inexpensive, relatively easy method for sharing floppies, printers, and modems.
2. Run-Around the MIS department—PC users frustrated by the delays in obtaining reports and programs that have



# GOLDEN VALLEY SYSTEMS

Best Prices • Best Quality • Best Service

## Get Novell Networking & Services

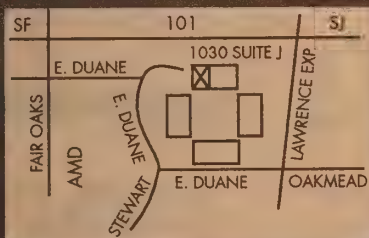
Omniconp is working with Golden Valley Systems to handle your networking needs, including:

Installation, Excellent Service,  
Maintenance Contracts, CNE's,  
Free Technical Estimates and  
Much, Much More!

Novell  
Certified  
Netware  
Engineer  
Logo

Call NOW and Find Out What  
We Can Do For You!

CALL (408) 946-2001  
or Golden Valley Systems



1030 E. DUANE AVE. STE. #J  
SUNNYVALE, CA 94539  
TEL: (408) 738-4921  
FAX: (408) 738-4924

## COMPLETE SYSTEMS

486DX2-66/256K VESA **CALL**  
486DX-50/256K VESA **CALL**  
486DX-33/256K VESA **CALL**  
486DX2-66/64K ISA **CALL**  
486DX-50/64K ISA **CALL**  
486DX-33/64K ISA **CALL**  
386DX-40/64K ISA **CALL**  
386SX-33 **CALL**

- 486 Systems with Intel CPU
- Mini-Tower Case w/200W Power Supply
- 4 MB 70ns RAM
- IDE 2 FD/2 HD Controller
- 2 Serial/2 Parallel/1 Game Ports
- 1.2 & 1.44 MB Floppy Drives
- 120 MB IDE Hard Drive
- 14" SVGA .28 dpi Monitor
- SVGA Card w/1 MB
- VESA Systems with VESA IDE & VESA SVGA Card

## NOTEBOOK SPECIALS!

### EVEREX V5

#### 386 SXL-25

- Removable 80 MB HD
- 5 MB RAM
- DOS
- Windows
- Carrying Bag
- Mouse

**\$975**

### SAGER/BONDWELL

4 MB RAM, 120 MB

- Hard Drive
- 386DXL-33 ..... **\$1530**
- 486SLC-25 ..... **1575**
- 486DX-33 ..... **1835**
- 486DX-66 ..... **2100**

## MONITOR SPECIAL

- SONY Trinitron 14" Monitor Non-Interlace,  
(1024x768, .25, Anti-Glare/Low Emission/MPR 2) ... **\$379**
- 17" (1280x1024, .26) ..... **750**
  - 14" (1024x768, .28) ..... **225**
  - 14" (1024x768, .39) ..... **189**
  - 15" (1280x1024/NI/Same As Mag/MX 15) ..... **469**
  - 15" (1024x768/NI/Black/Same As MAG/MX 15 Black) ..... **399**

## DRIVES

- 1.2MB Teac Floppy Drive ..... **\$49**
- 1.44 MB Teac Floppy Drive ..... **59**
- 1.2 MB Chinon Floppy Drive ..... **45**
- 120 MB IDE Hard Drive ..... **160**
- 130 MB IDE Hard Drive ..... **170**
- 170 MB IDE Hard Drive ..... **180**
- 200 MB IDE Hard Drive ..... **220**
- 200 MB SCSI ..... **220**
- 340 MB IDE Hard Drive ..... **340**

## NETWORK CARDS

- ETHERNET:**
- 8 bit E100 Coax/ET500TP ..... **\$69**
  - 16 bit E200 Coax/ET600TP ..... **79**
  - Boot Prom (For E100/200/300/600) ..... **25**
  - Hub 8 Port TP + 1BNC + 1 Cascading ..... **265**
  - 12 Port TP + 1BNC + 1AUI + 1 Cascading ..... **465**
  - Pocket Ethernet For Coax/TP ..... **159**
- ARCNET:**
- 16 bit for XT/AT Star Combo ..... **\$69**
  - 16 bit for XT/AT Bus Combo ..... **79**
  - 16 bit "4-in-1" Turbo Star & Bus (w. MCR 90C98A ASIC) ..... **\$99**
  - 4 Port Arcnet Passive Hub ..... **19**
  - 8 Port Coax Stackable Active Hub ..... **149**

## ADD-ON CARDS

- 2400 Baud Modem ..... **27**
- 9600/2400 Fax Modem ..... **48**
- IDE Controller w/2S, 1P, 1G .. **18**
- IDE Controller Card ..... **13**
- MCGP ..... **13**
- AT/IO w/2S/1P/1G ..... **12**

## SOUND CARD & VGA SPECIALS

- Media Vision Sound Card/16
- Plus Extra Software/3 ..... **\$129**
- Media Concept/Mike/Speaker ..... **59**
- 5426 VGA/Window Accelerator ..... **85**
- SVGA/1 MB/16 Bit ..... **16**
- Speaker/Amp for Sound Card ..... **15**

### TERMS & CONDITIONS

1. 1 Year parts & labor warranty on systems
2. Prices & availability subject to change w/o notice
3. Shipping, insurance and COD charges are additional & non-refundable

4. Return shipping must be insured and bearing a RMA # on the shipping label
5. Defective items replaced or repaired at our discretion
6. Not responsible for typographic

7. All returns are subject to 15% restocking fees and cover only computers, excludes peripherals. No refunds after 30 days.
8. Government & Corporate purchase orders are welcome



# BUSINESS SOLUTIONS

traditionally been generated by MIS are installing their own LANs, enabling staff to process information more directly and quickly.

3. Downsizing—the highest levels of management makes a conscious decision to utilize a client/server environment as the organization's information-processing platform. Most functions previously associated with minis and mainframes now reside on a LAN.

While LANs unquestionably provide vital plumbing in the quest for office efficiency, they do not solve information bottleneck problems on their own. Even a networked office relies on paper to convey most information. Constant requests for status updates and unnecessary administrative tasks tend to fill each day.

During the last several years, some products have helped to improve LAN-based productivity, but their acceptance has been surprisingly slow.

PC-based email packages have been around almost as long as networks, yet less

than 15% of networks utilize this most basic productivity tool. Even fewer users take advantage of the more sophisticated options email offers, such as attaching spreadsheets or word processing documents. It's hard to believe that anyone still passes around paper messages when it is so easy to do it electronically.

Fax servers are a networking information tool with even less acceptance than email. According to Optus (a maker of fax server

products), on average it takes ten minutes to print out a document, produce a cover sheet, and send it through the fax machine. It takes less than one minute to send a fax directly from the computer through a fax server. If an organization's average employee makes \$15 per hour (\$20 including benefits), and they send out twenty-five faxes a day, a fax server saves \$19,500 per year. This doesn't include the benefits from sending out faxes late at night

*While LANs unquestionably provide vital plumbing in the quest for office efficiency, they do not solve information bottleneck problems on their own.*

## EXCELLENCE IN QUALITY & SERVICE



Authorized Reseller SCO UNIX, SCO Open Desktop, SCO Open Enterprise System. Authorized Sunsoft Dealer. We offer complete "Turn-key" multi-user & multi-tasking solutions under SCO, SunSoft, & Novell. ISA & EISA systems for 4 to unlimited users. Up to 256MB RAM & 34GB hard drive array supported. Multi-processor systems are also available. Our Servers support Pentium.

We carry a full line of hardware options and software solutions for SCO, UNIX & Novell.

### VESA Local Bus

Truly The First VESA Compatible Local Bus System

486 DX/33 Complete System... \$1825/1775  
486 DX2/50 Complete System... \$2025/1975  
486 DX2/66 Complete System... \$2125/2075

Above Micronics/AMI Systems Include:

Diamond SpeedStar Pro w/1MB • 4MB RAM • 120MB Hard Drive • 1.2 & 1.44 Floppy Drives • Non-Interlaced 14" SVGA Monitor • DOS 6.0 • Windows 3.1 • 101 Keyboard • Mouse • Mid-Tower Case • 2 Serial, 1 Parallel & 1 Game Ports • Lifetime technical & 5 year labor warranty

Other Local Bus Systems Also Available

COMPAQ

IBM

### NOTEBOOKS

We Carry All Brand Names

AST Power Exec 486SL-25 4/200 ..... \$2495  
Compaq Contura 486SL-25 4/120 ..... 1995  
Samsung Notemaster 486 SLC 4/120 ..... 1695  
Texas Instruments 486DX-25 4/120 ..... 2095  
Toshiba T4600 486SL-33 4/120 ..... 2795  
Twinhead 486DX-33 4/120 ..... 1995

### 486-DX33/50/66 MHZ 120MB Hard Drive Super VGA Systems

• 128K Cache  
• 4MB RAM  
• 1.44 Floppy Drive  
• 120MB Hard Drive  
• SVGA Non-Int. Monitor .28dp  
• SVGA Card w/1MB  
• 2 Serial, 1 Parallel, & 1 Game ports  
• Mid Tower case  
• Enhanced 101 keyboard  
• MS DOS 6.0  
• Lifetime technical & 5 year labor warranty

\$1395/1495/1595



HEWLETT  
PACKARD

### PRINTERS

DeskJet 500 ..... \$325  
DeskJet 500C ..... 425  
DeskJet 550C ..... 625  
LaserJet IIIIP ..... 875  
LaserJet 4 ..... CALL  
LaserJet 4M ..... CALL

**OUR SERVICES & WARRANTY INCLUDE** • FREE Needs Analysis • FREE Installation of Software on System purchase • FREE 1 hour data transfer from your existing computer • Lifetime technical support • 5 Year labor, 1 Year Parts Warranty • Complete Turnkey Solutions • On-Site Service Available

(510) 906-1690

Fax (510) 906-1699

1554 Newell Avenue,  
Walnut Creek, CA 94596  
Hours: M-F 9-6 Sat 11-3

Systems Unlimited

Systems & Enterprise Wide Networking

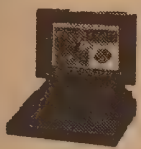
Closed last Saturday of the month • Prices subject to change w/o notice



# No One Beats Computer Selection Prices & Service!

Hurry! Apple On-the-spot Rebates ends September 30, 1993!

## Apple® Macintosh® PowerBook™ 165c



With a 33-MHz 68030 microprocessor and a 68882 math coprocessor, you can't get a more powerful computer. But what makes this great is the built-in color display with **256 colors!** 4MB RAM & 80 MB HD.

**\$1799.99**

- 50.00 Rebate

**\$1749.99**

**A Steal at this price!**

## Apple® Personal LaserWriter® LS Printer



Probably the most affordable Apple® laser printer available today! At 300 DPI resolution and 4 pages per minute, you'll get professional quality laser printing at a great price!

**Factory Authorized Close-out!**

**\$565.99**

**Limited Quantity!**

## Apple® Macintosh Quadra™ 840 AV



With a 40 MHz Motorola 68040 processor and the ability to handle telecommunications, video, speech, and audio functions, this computer is the most powerful, feature-rich system Apple® has ever built! 8 MB RAM & 230 MB HD (# M9025 LL/A).

**The computer of the future is here now!**

**Call for best pricing!**

Monitor & Keyboard extra

**Unbeatable Bargain!**

**The price keeps getting better!**

## Apple® Macintosh® PowerBook™ 165



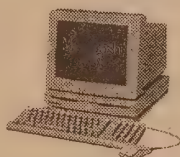
With a 68030 microprocessor at 33MHz, this PowerBook™ 165 is 30% faster than the Apple® Macintosh® PowerBook™ 160! It also supports up to 14 MB RAM and has 16 levels of gray in a 10-in. screen. 4MB RAM & 80MB HD (# M1641LL/A)

**\$1799.99**

**New! Fast and Affordable!**

**The best deal in town!**

## Apple® Macintosh® LC II



**CPU Factory Authorized Close-out!**

The Macintosh® LC II, the perfect choice for education or business can be yours with 16 MHz 68030 processor with an Apple SuperDrive™, support for 7 SCSI devices, 2 serial ports, and built-in AppleTalk® for an out of this world price! CPU only. Monitor & Keyboard extra.

**\$799.99**

4MB RAM & 80MB HD  
4 Units Left!

**\$949.99**

4MB RAM & 160MB HD

**No one beats these prices!**

**This computer talks!**

## Apple® Macintosh Centris™ 660 AV



This Computer obeys your commands! The Macintosh Centris™ 660AV combines the horsepower of a 25 MHz 68040 microprocessor with a 55 MHz digital signal processor for new audio-visual technology like voice recognition and video capture! 8MB RAM & 80 MB HD. (# M9045LL/A)

**\$1998.99**

Monitor & Keyboard extra

**Incredible Price!**

## Apple® Macintosh® PowerBook™ 145b

The PowerBook™ 145b has a 25MHz 68030 processor and a bright full page-width display, for solid Macintosh® performance and flexibility. A superior choice for high-performance, low-cost notebook computing! 4MB RAM & 40MB HD



**\$1299.99**

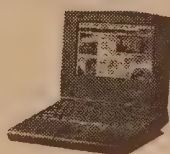
On-the-spot rebates.

On-target solutions.



Authorized Dealer

## The Best of Both Worlds! Apple® Macintosh® PowerBook Duo™ 210



The best of both worlds can be yours! Desktop power and notebook versatility are all available in this computer. No cables or networking software needed. It works with an advanced desktop docking station. 4MB RAM & 80MB HD.

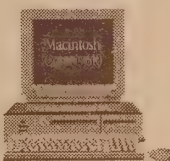
**\$1398.99**

- 100.00 Rebate

**\$1298.99**

**Save \$100 on-the-spot**

## Apple® Macintosh Centris™ 610 w/ CD-ROM Drive



With a 20 MHz Motorola 68040 chip, Apple SuperDrive™, AppleCD™ 300i, Built-in LocalTalk® and AppleTalk® networking software, this computer can really perform! 8 MB RAM & 80 MB HD (# M1869 LL/A).

**\$2075.00**

- 300.00 Rebate

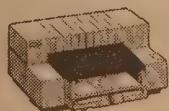
**\$1775.00**

Monitor & Keyboard extra

**No one beats this price!**

Apple, the Apple logo, AppleTalk, LaserWriter, LocalTalk, and Macintosh are registered trademarks of Apple Computer, Inc. AppleCD, Apple SuperDrive, Macintosh Centris, PowerBook, and PowerBook Duo are trademarks of Apple Computer, Inc.

## HP DeskWriter C Printer

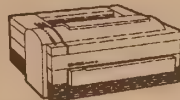


- 300 dpi
- Quality COLOR printing
- 100 sheet paper tray

**\$415.00**

**Best Price!**

## HP LaserJet 4L Printer



- 300-dpi laser printing with Resolution Enhancement technology and microfine toner for smooth, sharp text and graphics

**Affordable Quality!**

**\$679.99**



HEWLETT  
PACKARD  
Authorized Dealer

## HP DeskJet 500C printer



- Affordable laser-quality printing
- Allows 300-dpi COLOR printing on plain paper & transparencies
- Wide variety of built-in fonts

**Don't pay more!**

**\$415.00**

# COMPUTER SELECTION

**Redwood City**  
(415) 368-8828

2001 Middlefield Road  
(at Woodside Rd., by Price Club)  
M-F 9:00 - 5:30 Sat 12-5  
Fax: (415) 368-8803

**San Francisco**  
(415) 543-9888

201 Mission Street  
(across from PG & E Hdqrs)  
M-F 9:00 - 5:30 Sat 10-4  
Fax: (415) 777-1177

**Sunnyvale**  
(408) 746-2288

1202 Apollo Way  
(at Central & Lawrence)  
M-F 9:30 - 5:30 Sat 12-4  
Fax: (408) 746-2208

**Walnut Creek**  
(510) 943-2882

1676 N. California Blvd  
(next to Max's Opera Cafe)  
M-F 9:00 - 5:30 Sat 12-5  
Fax: (510) 943-2890

\*APPLE® REBATE ENDS SEPTEMBER 30, 1993. All sales subject to stock on hand. Not responsible for errors or omissions. Sale prices good for one week from date of advertisement.



# BUSINESS SOLUTIONS

when rates are cheaper, from freeing up congestion at the fax machine, etc. Fax servers also save time by allowing electronic receiving of faxes for viewing, editing, and routing.

## PRODUCTIVITY FOR THE MASSES

Until fairly recently, computer-based administrative productivity meant

mainframe or mini computers. The mainframe's proprietary nature inevitably means fantastic expenses in hardware and programming to reengineer the office. In the PC-based network environment, a new generation of software makes office automation affordable for even very small companies. Organizations no longer need to put up with administrative inefficiency. The Windows operating environment is the

enabling technology making these new products possible. The GUI (graphical user interface) provides very user-friendly screens where programs are learned with exceptional ease. The OLE (Object Linking and Embedding) feature of Windows enables seamless passing of information between different programs. The DDE (Dynamic Data Exchange) and DLL (Direct Linking Library) provide data access efficiencies. Programming and hardware requirements are consequently far less burdensome than the DOS world.

The new generation of automation products revolutionizes information management by providing simple yet efficient environments in which to share data among network users. The new software productivity packages fall into two categories: (1) groupware and (2) imaging and workflow.

## GROUPWARE

Groupware is a category of software for which, like the spreadsheet in early days, it is hard to find a consensus description. *PC Magazine's* evaluation criterion considers a product as groupware if it "automates information sharing and/or the management of business processes." Typical groupware functions include email capabilities, group scheduling, and electronic conferencing. Lotus Notes is the pioneer of groupware and is the dominant product in this category.

## IMAGING & WORKFLOW

Imaging products, as part of a larger system, allow the electronic storage and retrieval of documents to substitute for paper-based filing systems. Wang was one of many imaging pioneers using proprietary hardware. Several of today's PC-based imaging products extend their capabilities beyond the "office back-end" functions of filing, and focus on handling documents after retrieval. They often incorporate workflow functions along with document management capabilities. Keyfile is a leader in the field by offering imaging software that runs on non-proprietary PC networks.

## LOTUS NOTES

Traditional groupware and imaging products increasingly clash as their capabilities overlap. Lotus Notes 3.0 includes workflow and imaging options, while many imaging products incorporate more groupware functions.

Lotus has been selling Notes for over three years, and is a leader in groupware. All six of the nation's largest CPA firms now

*continued on page 200*

## We know your NOVELL training is important to you.

**And we are listening...**

| YOU ASKED FOR:                                                                 | AND CLARITY TECHNOLOGIES HEARD YOU:                                                                                                               |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> The very best instructors...                          | ✓ Clarity instructors are highly rated <b>Certified NetWare Instructors</b> with <i>extensive field experience</i> .                              |
| <input type="checkbox"/> Quality, customer service...                          | ✓ Clarity provides <i>each student</i> with their own Education Counselor to guide and support them in achieving their individual training needs. |
| <input type="checkbox"/> CNE, ECNE, and CNA programs...                        | ✓ Clarity <i>offers all</i> Certified NetWare Engineer, Enterprise Certified NetWare Engineer, and Certified NetWare Administrator programs.      |
| <input type="checkbox"/> Daytime, evening, weekend, and accelerated classes... | ✓ Clarity was <i>the first NAEC</i> in the Bay Area to offer CNEvening and Accelerated CNE programs. Now offering <i>Weekend CNE</i> program!!    |
| <input type="checkbox"/> State-of-the-art equipment and facilities...          | ✓ Clarity offers the highest quality training facilities including <i>separate classrooms and laboratories</i> .                                  |
| <input type="checkbox"/> Convenient financing options...                       | ✓ Clarity <i>now offers</i> financing for your CNE, ECNE, and CNA training.                                                                       |

**FREE...  
CNE  
Orientation**

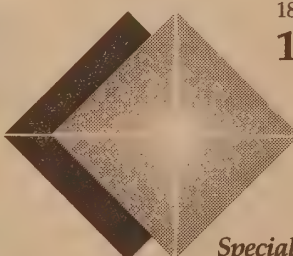
October 13th  
in our San Jose  
Training Center

Register today...  
**1-800-729-9995**

**Serving the entire Bay Area, with three convenient locations:**

444 Market Street, San Francisco, CA 94111  
2175 N. California Blvd, Walnut Creek, CA 94596  
181 Metro Drive, San Jose, CA 95110

**1-800-729-9995**



## CLARITY

TECHNOLOGIES

Specializing in Network Education

Novell  
Authorized  
Education  
Center

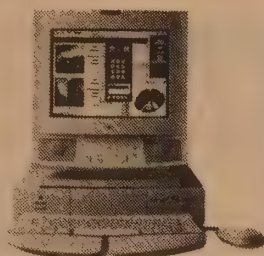


On-the-spot  
rebates.



Authorized Dealer

**Apple®  
Macintosh  
Centris™  
660AV**  
• 8/230  
• 25MHz  
• 68040 Processor  
• 8MB RAM  
• 1MB VRAM  
• Ethernet  
• FPU



**\$2107**

**Apple®  
Macintosh  
Quadra™  
840AV**  
• 8/230  
• 40MHz  
• 68040 Processor  
• 8MB RAM  
• 230MB Hard Drive  
• Ethernet



**\$3262**

**Apple®  
Macintosh  
PowerBook™  
165C 4/80**  
• 33MHz  
• 68030 Processor  
• Built in color display  
with 256 Colors!



**\$1754**

Apple® Macintosh LCIII 4/80 ..... \$1199  
Apple® Macintosh Centris™ 650 8/80 ..... 1809  
Apple® Macintosh Centris™ 660AV 8/230 w/CD .... 2369  
Apple® Macintosh Quadra™ 950 8MB ..... 3175

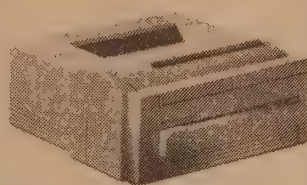
Apple® Macintosh Quadra™ 800 8/230 ..... \$3022  
Apple® Macintosh Quadra™ 840AV 8/230 w/CD ... 3528  
Apple® Macintosh Quadra™ 840AV 16/1GBw/CD ... 4999  
Apple® LaserWriter® Pro™ 630 ..... 2235  
PowerBook™ 180 4/80 ..... 2430

PowerBook™ 180C 4/80 ..... \$2919  
PowerBook Duo™ 210 4/80 ..... 1335  
PowerBook Duo™ 230 4/80 ..... 1530  
Apple® Portable StyleWriter II ..... 395

On-target  
solutions.

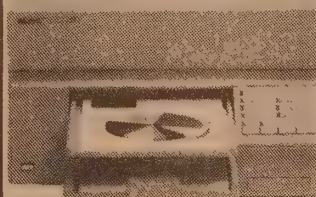
Apple, the Apple logo, Macintosh Stylewriter, and LaserWriter are registered trademarks of Apple Computer Inc. PowerBook, Macintosh Quadra, Powerbook Duo, and Macintosh Centris are trademarks of Apple Computers, Inc.

**HEWLETT  
PACKARD**  
Authorized Dealer



**HP LaserJet 4ML**  
The HP LaserJet 4ML printer has 4MB RAM, PostScript language and enhanced HP PCL5 with automatic language switching, microfine toner cartridge, 100-sheet multi-purpose tray, power cord and printer drivers

**\$CALL**



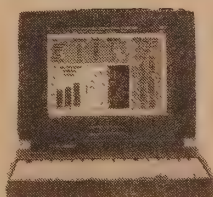
**HP DeskJet 1200C**  
• High quality resolution; 600x300 dpi text and 300 dpi color  
• 35 Intelligent, 10 True Type  
• 2MB, expandable to 26MB with SIMMs  
• Color PCL5  
• Print Speeds: 7ppm fast, 6ppm normal, 4 ppm HQ

**\$CALL**

## HP PRINTERS

HP LaserJet 4L ..... \$685  
HP DeskJet Portable ... 375  
HP DeskJet 500 C ..... 380  
HP DeskJet 550 C ..... 564  
HP DeskWriter 550 C .. 564  
HP DeskWriter C ..... 380  
HP DeskWriter ..... 284  
HP DeskJet 500 ..... 284  
HP LaserJet IIIP ..... \$849  
DeskJet 1200C/1200C  
w/PostScript® ..... CALL  
Omnibook 300 ..... CALL  
HP LaserJet 4si ..... CALL  
HP ScanJet IIc ..... CALL  
HP ScanJet IIp ..... 699

**COMPAQ**  
Authorized Dealer



**Compaq Contura 4/25**  
• 486SL  
• 4MB RAM  
• 120MB Hard Disk  
• DOS  
• Windows  
• Winworks  
• Trackball  
• PFS

**\$1899**

**Every Prolinea  
bundled with DOS,  
Windows, Mouse!**

Prolinea 3/255 M120, Bundle ..... \$845  
Prolinea 4/255 M120, Bundle ..... 1100  
Prolinea 4/33 M120, Bundle ..... 1485  
Prolinea CDS 4/120 with CD-ROM  
& Sound Card ..... 1630  
Compaq VGA Monitor (Demo) ..... 249

**Every Contura  
bundled with DOS,  
Windows, Trackball!**

Contura 4/25, M120 ..... \$1899  
Contura 4/25C, M120 ..... 2570  
Great File Server  
Pentium® Deskpro 5/60M,  
8/240 ..... 4675  
ProSignia 486DX2-66 4/0 IDE Cont. .... 2475

**SPECIALS!  
ON DEMOS**  
Limited Quantities

**Desktops**  
AST 386/33MHz 8/210MB EISA ..... \$900  
AST 486/33MHz 8/245MB EISA ..... 1250  
Compaq Deskpro 50M Model 340/W ..... 2500  
Compaq Deskpro 486S/16M Model 120/W ..... 1100  
Compaq Deskpro 4/251S Model I ..... 900  
Compaq Deskpro 4/331 120W ..... 1150  
Compaq Deskpro 3/331 84/W ..... 1100  
Compaq Prolinea 3/255 Model 120W ..... 850  
Compaq Deskpro 386 25M Model I ..... 800

Compaq Deskpro 486/S 25M Model 120 ..... \$1200  
HP Vectra 486/50MHz 4/120MB ..... 1500  
HP Vectra 486/33N 4/170M ..... 1050  
HP Vectra 486/25N 4/170 ..... 1000  
HP Vectra 386/20SX 2/120 ..... 600  
**Portables**  
Compaq 486C Model 120 ..... \$2750  
Compaq 486M Model 210 ..... 2000

**Printers**  
Apple® LaserWriter™ Pro 600 ..... \$1499  
Compaq Pagemark 20 ..... 2400  
Compaq Pagemark 15 ..... 1800  
HP LaserJet III PostScript AppleTalk ..... 1200  
HP LaserJet II ..... 1000  
HP IIp ..... 500  
HP Fax (Demo, Plain Paper) ..... 399

**NEC  
EPSON®  
OKIDATA®  
TOSHIBA**

Authorized Dealer

## ComputerLand of Hayward

**BUSINESS TO BUSINESS • PERSON TO PERSON**

22540 FOOTHILL BLVD. HAYWARD, CA 94541

**Tel: 510/538-8080**

Hours: M-F 8:30-6 Sat 11-5 Prices reflect a cash discount.

|       |                                     |          |
|-------|-------------------------------------|----------|
| A St. | <input checked="" type="checkbox"/> | B St.    |
|       |                                     | Foothill |
| N     | 880                                 |          |

Not responsible for typographical errors.  
Prices subject to change without notice.



# HiQ

The Pentium  
System is  
Available  
at HiQ  
Now!

Advance to  
the *New Age*

Of Pentium  
Computing

**FREE**  
Financing!  
for 90 Days!\*

**100%**  
Financing Available -  
**LOW**  
Monthly Payments!

**30 Day**  
"No Questions Asked"  
**Money-Back  
Guarantee**

- FREE Lifetime Technical Support
- One Year Parts & 2 Years Labor Warranty
- Customized Configurations & Leasing
- Corporate & Government P.O.s Welcome!

\*With Credit Approval

- Intel Pentium 60MHz Processor
- AMI Excalibur VESA Local Bus Motherboard
- 16MB RAM Exp. to 128MB On-board
- 16K Internal Pentium Cache
- 1.2MB and 1.44MB TEAC Floppy Drive
- 210MB Western Digital IDE Hard Drive
- Integrated VESA Local Bus IDE
- Controller with 2 Serial & 1 Parallel Ports
- Fahrenheit VESA Local Bus SVGA Card with 1MB RAM
- 15" ADI 4G SVGA 1280x1024, 0.28dp Color Monitor

  
**American  
Megatrends**



WESTERN DIGITAL  
Caviar is a trademark of  
Western Digital Corporation

- 101 Enhanced Waterproof Keyboard
- Full Tower case with 250W Power Supply
- Hi-Res Mouse with Windows 3.1 and DOS 6.0 with manuals

Only **\$5095**  
Low Monthly  
Payments of **\$142**

Since 1987, HiQ has set the standard for sales and service in the personal computer market place. With offices from California to Georgia, HiQ has the experience and knowledge to help you achieve your personal and business computing goals. There are many companies that will sell you a computer, but only one that will back **you** up with technical support, quality equipment and good old-fashioned service. If you're looking for a computer or an entire Local Area Network, HiQ wants to help you make the job easy.

**Call HiQ Today!**

**1-800 827-5836**



# HiQ's Powerhouse Computers take you to the Highest Level in personal computing!

**PENTIUM  
READY!**

## HiQ Ultra-Graphics Station

- Intel 486DX2-66MHz Processor
- AMI Enterprise III EISA VESA Local Bus Motherboard
- Intel P24T Support (ZIF Socket)
- 8MB RAM (70ns) Expandable to 256MB
- 256K SRAM Cache
- 1.2MB and 1.44MB TEAC Floppy Drive
- 210MB IDE Western Digital IDE Hard Drive
- DTC 2272 VESA 32-Bit Local Bus IDE Controller with 2 Serial and 1 Parallel Ports
- Fahrenheit VESA Local Bus 32-Bit SVGA Card 1280 with 1MB RAM
- 15" ADI 4G SVGA 1280x1024, 0.28dp Color Monitor
- 101 Enhanced Waterproof Keyboard
- Full Tower case with 300W Power Supply
- Hi-Res Mouse with Windows 3.1 and DOS 6.0 with manuals



- ADI Monitor -  
2 Year Warranty

**\$75<sup>Per Month</sup>**  
**Only \$2599**

## Handles Intense Math or Graphics Applications!

### HiQ Super Power 4DX2-66VLB and HiQ Power 433VLB Systems

When you need a system to run Scientific and Graphics applications efficiently, this Top-of-the-Line system offers you Power, Speed and Dependability. Built with the highest quality parts available, such as Intels' Lightning-fast 486DX2-66MHz Microprocessor and the Micronics High-end motherboard!

- Intel 486DX2-66MHz Processor/486DX-33MHz Processor
- Micronics VESA Local Bus motherboard
- 4MB RAM (70ns) expandable to 64MB
- 256K SRAM Cache
- 2-VESA LB, Six 16-Bit Slots
- 1.2MB and 1.44MB Teac Floppy Drives
- 210MB Western Digital/IDE HDD 13ms
- Integrated 32-Bit Local Bus IDE controller w/2 Serial, 1 Parallel ports
- Fahrenheit VESA LB SVGA Card w/1MB RAM
- 14" SVGA Color Monitor, Non-Interlaced, 1024x768, 0.28dp
- 101 Enhanced Waterproof Keyboard
- Mid Tower Case w/230W Power Supply (Full Tower upgrade option - add \$30)
- DOS 6.0/Win 3.1/Hi-Res Mouse

Stop by our convenient Sunnyvale Store  
(See map below)



\*Computer Shopper  
Top 10 System Review  
March 1993

**\$65<sup>Per Month</sup>**

**\$1949**  
**\$1749**



**What are You Waiting For? Drive a Pentium Today!**



**HiQ  
Now Carries  
the Kalok  
P3250DS  
250MB  
Removable  
Hard Drive!**

**Only  
\$399**

## A Remedy For Your Large File and Data Security Headaches!

3x Faster than the competition, this 17ms Kalok Removable Hard Drive processes data faster than Bernoulli, Syquest, and Iomega - at a better price! Perfect for storing data-sensitive files or transferring oversized amounts of information from home to work. Think of it as 250MB cartridge! Can be used in fixed or removable applications. This ruggedly built, 3.5 x .5" drive will fit a Portable Computer, Workstation, Disk Array, and meets Military Security Specifications. Comes with a TWO YEAR MANUFACTURER'S WARRANTY. (360MB and 500MB Drives available soon!)

**AMI Diagnostic Software Retails \$60 w/System Purchase Only \$19.00!**

## Northern California Locations:

### South Bay

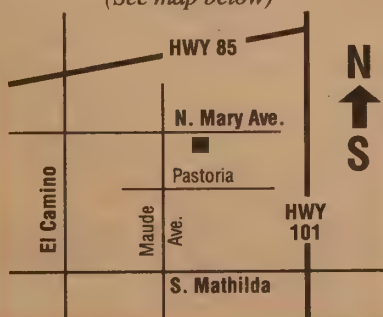
740 N. Mary Ave., Sunnyvale, CA 94086  
(408) 245-5836, Fax: (408) 245-3108

### Marin County

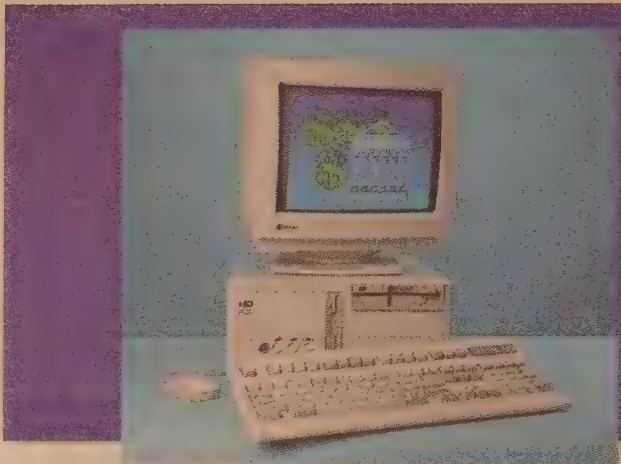
2048 Fourth St., San Rafael, CA 94901  
(415) 459-1893, Fax: (415) 459-7248

### Sacramento

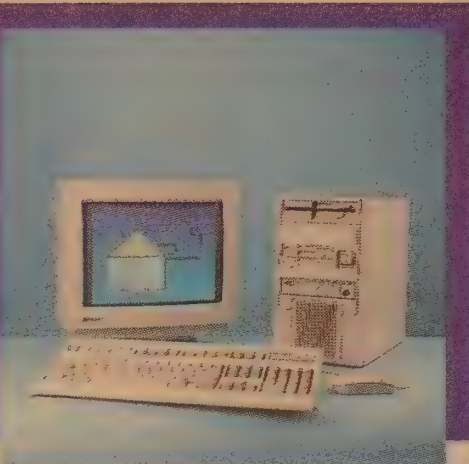
1967 Zinfandel Dr., Rancho Cordova, CA  
(916) 635-7842, Fax: (916) 635-3692







HiQ Desktop configuration



HiQ Mini Tower configuration



NEW! HiQ Black Case System - Additional Cost (Call for Other Exciting Black System Configurations)

## HiQ Ultimate 433I/450I Systems

For Business People Who Need a Powerful, Reliable System to Get the Job Done.

- Intel 486-33/486DX-50 Processor
- 128K SRAM Cache
- 4MB RAM expandable to 32MB
- 1.2MB and 1.44MB Teac Floppy Drives
- 170MB IDE Conner HDD w/32K Cache
- IDE controller 2H/2F w/ 2 Serial, 1 Parallel and 1 Game ports
- Trident OEM SVGA Card, 16-Bit, 1024 x 768 w/1MB RAM
- 14" SVGA Color Monitor 1024x768, 0.28dp
- 101 Enhanced Waterproof keyboard
- AT Desktop Case w/220W PS

**\$45 Per Month**

Only **\$1259/\$1399**

## HiQ Ultimate 433VLB/4DX2-66VLB Systems

Create Impressive Graphics!

**PENTIUM READY!**

- Vesa Local Bus
- Intel 486-33DX/486DX2-66MHz Processor
- 4MB RAM (70ns) Expandable to 32MB
- 64K SRAM Cache
- 1.2MB and 1.44MB Teac Floppy Drives
- 210MB Western Digital IDE HDD w/32K Cache
- Vesa Local Bus 32 Bit IDE controller 2H/2F w/ 2 Serial, 1 Parallel and 1 Game ports
- VESA LB 32-Bit SVGA Card w/1MB RAM
- 14" SVGA Color Monitor 1024x768, 0.28dp
- 101 Enhanced Waterproof keyboard
- AT Desktop Case w/220W PS

**\$52 Per Month**

Only **\$1359/\$1559**

## HiQ's Great Value Systems

- 4MB RAM Expandable to 32MB
- 64K SRAM Cache
- 1.2MB & 1.44MB Floppy Drives
- 170MB Conner/IDE HDD 18ms
- IDE controller 2 HDDs/2 FDDs with 2 Serial, 1 Parallel and 1 Game ports
- Trident OEM SVGA Card w/1MB RAM
- 14" SVGA Color Monitor 1024 x 768, 0.39dp
- 101 Enhanced keyboard
- Mini Tower Case w/220W PS

Low Monthly Payment of **\$39**

HiQ 486DLC-40MHz System .....Only **\$978**

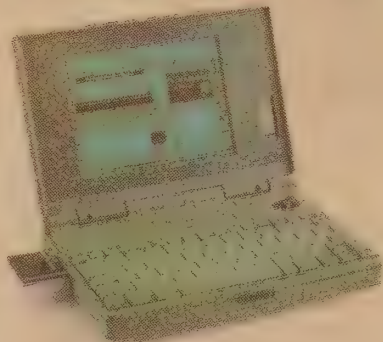
HiQ 486DX-33MHz System .....Only **\$1148**

HiQ 486DX-40MHz System .....Only **\$1158**

HiQ 486SLC2-66MHz System ....Only **\$1198**

**Hot Monthly Special!**

## NOTEBOOKS



**Twinhead**

### 486LC-33 MHz SubNote

- 2MB RAM Expandable to 8MB
- External 1.44MB Floppy Drive
- 8" Side-Lit VGA 64 Shades of Gray Display
- One Serial and One Parallel Ports
- PCMCIA Slot
- 85MB Hard Drive
- 79 Key Keyboard
- Built-in Trackball with 2 Buttons
- MS-DOS 6.0/MS Win 3.1 w/Manuals
- Dimensions: 7.1" x 10" x 1.6"
- Weight: 4 LBs with Battery

Only **\$1449**

**\$48 Per Month**



**Twinhead**

### 486DX-33MHz NoteBook

- 4MB RAM Expandable to 20MB on-board
- Built-in 1.44MB Floppy Disk Drive
- One Serial Port and One External Keyboard and Mouse Port
- 10" Paper White, 64 Shade Sidelit Display
- 130MB IDE HDD (200MB available)
- 84 Key keyboard, 12 Function Keys with Numeric and Editing Keypad
- MS-DOS 6.0/Win w/manuals
- Dimensions: 8.5"x11"x1.7"
- Weight: 5.8lbs with battery

Only **\$2039**

**\$60 Per Month**



**Twinhead**

### 486DX-33MHz

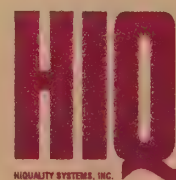
### Active Color Matrix NoteBook

- 4MB RAM Expandable to 20MB on-board
- Built-in 1.44MB Floppy Disk Drive
- 8.5" Active Color Matrix, 256 color, Super Twist Nematic, 512K Video RAM
- Two Serial Ports ■ One External Keyboard Port
- 130MB IDE Hard Disk Drive (200MB available)
- 84 Key kybd, 12F keys w/Num & Editing Keypad
- MS-DOS 6.0 and MS Windows 3.1 w/manuals
- Dimensions: 8.5" x 11" x 1.8"
- Weight: 6.3lbs with battery

Only **\$3649**

**\$105 Per Month**

**Ordering Information:** Shipping and handling additional. Corporations rated 32A or better and Government accounts are accepted on a 30 net basis. C.O.D. orders over \$500 add \$10.00 special handling charges. Fill returns must have prior authorizations from our Customer Service Department (408) 245-5836. Fill returns must be in original packaging and include all warranty cards and manuals. Incomplete product returns, unauthorized returns and refuse shipments are subject to a 20% re-stocking charge. Fill prices and specifications are subject to change without notice. All trademarks belong to their respective companies. Not responsible for typographical errors.



For Orders Call:

**1-800-827-5836**

740 N. Mary Avenue,  
Sunnyvale, CA 94086

TEL: (408) 245-5836  
Fax: (408) 245-3108



# Telephone Management With A PC

## *HotLine User Migrates To Windows, Discovers YourWay*

BY  
ED KAHN

### RESOURCES:

**Hewlett-Packard 95LX, \$550/\$799**  
Hewlett-Packard  
1000 N.E. Circle Blvd.  
Corvallis, OR 97330  
(800)443-1254

**HotLine 2.25, \$69.95**  
Smith Micro Software, Inc.  
P.O. Box 7137  
Huntington Beach, CA 92615  
(800)882-3900

**YourWay 3.0, \$99.00**  
Prisma1 Software Corp.  
2301 Clay St., Ste. 100  
Cedar Falls, IA 50613  
(800)437-2685

If someone had told me years ago that the task I'd be using my computer for most frequently would be making phone calls, I would have laughed. But, in fact, that's the way it turned out. When I turn my computer on in the morning, I automatically open my telephone management software along with my word processor, communications program and note taker.

It all began nearly a decade ago, when someone introduced me to an early version of HotLine, a memory resident DOS-based program that holds telephone directories. Since then, I've come to rely upon my telephone management software for everything from placing calls to keeping my addresses in order to making brief notes about contacts.

Originally, the company that sold the program also published extensive specialized telephone directories that allowed you to get a full listing of high-tech companies, for instance, or colleges and universities or even all 800 numbers. The only limitation was the size of your hard disk. For years, I kept phone listings of America's ten thousand largest corporations and another database of five thousand high-tech companies in addition to my personal phone directory.

When you call up HotLine, even from within another application, you see the beginning of the directory. The cursor is positioned for you to type in a name. Hit Enter, and the listing for that name appears. Hitting Enter again dials the number through your modem. There are also listings that display area codes for cities around the world, and likewise tell you what places are covered by any area code.

A note field lets you make notes about any phone call. For example, when I call a company, I make a small note about my contact's name and extension number. It's really a terrific system. (HotLine has a lot more capabilities than I can discuss here, but this is the

gist of how the program works.)

When I moved over to Windows, I searched in vain for a program that would offer me the convenience I'd come to depend on. The HotLine people told me they were working on a Windows version, but could offer no immediate solution. I tried several programs that for one reason or another simply didn't do the job, and finally stumbled upon a program that, while it didn't do everything HotLine 2.25 did, did a lot more in other ways. For now, I am content with YourWay 3.0.

### YOUR WAY

YourWay is actually billed as contact management software, but what it does best for me is offer excellent telephone management in Windows. It installs easily, and the tutorial in the documentation walks you through the basic operations of the program.

The opening screen looks like a Rolodex card file. If you click the mouse on one of the alphabetized letter tabs, you will instantly move to that part of the directory. If the name you want is within the cards shown on the screen, you can click the mouse on that index name and the card will come to the front of the list. You will then see all of the fields you have asked the cards to hold. In my case, I have fields for first name, last name, company, address, city, state, ZIP, home phone, work phone, and fax. If you want different or additional fields, you can create them easily—I chose my fields because I'd been using nearly identical ones in HotLine and didn't want to reenter all of the information.

The easiest way to place a call is to hit the F8 key, then Enter.

The database that holds your listings is useful for a number of jobs besides placing phone calls. Through the print menu, you

YourWay  
is actually billed  
as contact management  
software, but what it does  
best for me is offer  
excellent telephone  
management  
in Windows.



can set up the information so it will create labels of almost any size or layout. In addition, you can use the data to create printed phone books in all of the standard formats: Day Timers, Franklin Planner, Fil-O-Fax, and Day Runner. You can also print out Rolodex cards and envelopes.

For each database you set up, you also establish a label format—even if you never intend to print a label. This format is carried right along with the database. When you set up the label format, you organize the fields within the database to print out in any way you want. In my case, I set up the first line with the first name followed by a space and then the last name. On the next line, I placed the company. The final two lines hold the address followed by the city, state and ZIP.

Now, when I'm in another application, I can easily transfer this information. Here's how it works. When you install YourWay, you can choose to have the Quick Menu option installed. This feature places an icon at the left side of the title bar of every application you run within Windows. When you hit this icon with the mouse pointer, you are instantly switched back into the YourWay cardfile. Locate the name you want copied, and select Copy Address from the Edit menu. Now click on the Quick Menu icon again, select Switch Back, and you're once again where you left off in your primary application. From the Edit menu, choose Paste, and the information is placed in your document.

I find this a dream for putting addresses inside of letters. No longer do I have to run the risk of making a mistake as I copy an address from a printed list.

A note is attached to each entry in the cardfile; you can automatically have information entered here, as well as manually type in notes. When you make a phone call from YourWay, a screen pops up that times the call and lets you write a notation about its subject matter. If you click the "complete" button after the call is finished, YourWay will make a notation showing the time and duration of the call as well as its subject matter. The notepad is accessed by clicking the mouse pointer on the pushpin icon.

## MOVING FILES

When I got my first computer, I knew that creating a telephone and address directory was one of the first things I wanted to do. I gathered together all of my various phone

books and began to enter the data in dBASE.

Soon, I began using HotLine and was able to import the dBASE file into the program. Over the years, I've kept my directory up to date and exported the data a number of times for different reasons. For a long time, I exported the file each month to a program that allowed me to print out a nice-looking document, so I could have an up-to-date phone book with me when I traveled.

Later, I needed to download the data to a Hewlett-Packard 95LX palmtop computer. Once again, with a little work, I was able to use the same data and avoid reentry. It seems like more trouble than it's worth to reenter this data again and again, so the ability to keep using the same file is a great feature.

YourWay makes it easy to import and export data from a number of different formats. One thing I especially like about this program is that you can change the order of fields at any time, as well as add or delete fields. I could imagine, for instance, adding a title field to each record so inside addresses would indicate Mr., Ms., Dr. or whatever.

The only problem I've had with moving my data from program to program and machine to machine is the joining of the first and last name. Some programs, such as HotLine, work better with a name field which includes the last name followed by a comma and the first name. Separating these into two different fields is a task that took some kludging.

You also can select any field or fields for indexing the data. I indexed by last name and then first name. Occasionally I want to see the listings by company name, and this is easily accomplished.

## WISH LIST

As good as this program is, there are still some problems which I hope will be corrected with the next release of YourWay.

It would be easier to find the listing you want if the cursor automatically appeared within the Search Index field. Then you could simply begin to type the name you wanted until the card appeared on the top of the stack.

Another irritant is that when you place a call, the area code will be dialed unless you leave it off of your listing. If you use one computer that is always in the same location, there is no problem—just omit

YourWay makes it easy  
to import and export  
data from a number of  
different formats. One  
thing I especially like  
about this program is  
that you can change  
the order of fields at  
any time, as well  
as add or delete fields.



# Motherboard Special Offer

## 486DX2-66/DX-50/DX-33

Local Bus Slots

**PENTIUM**  
Socket Ready

256K cache

**\$ 115**

486/40/64K

LandMark 130MHZ

Local Bus system

**\$ 323**



|                                                             |                                                            |                                                            |                                                            |                                                                                                                                                                                                                               |                                      |
|-------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 486DX2-66<br>64K cache<br>Local bus system<br><b>\$ 682</b> | 486DX-50<br>64K cache<br>Local bus system<br><b>\$ 620</b> | 486DX2-50<br>64 cache<br>Local bus system<br><b>\$ 553</b> | 486DX-40<br>64K cache<br>Local bus system<br><b>\$ 498</b> | 486-33<br>64K cache<br>Local bus system<br><b>\$ 298</b>                                                                                                                                                                      | 486-33<br>64K cache<br><b>\$ 270</b> |
| 486SX-25<br>64K cache<br>Local bus system<br><b>\$ 294</b>  | 386-40<br>64K cache<br><b>\$ 228</b>                       | 386SX-33<br>SYSTEM<br><b>\$ 202</b>                        | 386SX-25<br>SYSTEM<br><b>\$198</b>                         | <b>BASIC SYSTEM CONFIGURATION:</b><br>Motherboard & CPU, Super High Speed Jumper<br>1:1 2HD/2FD Controller<br>1.44MB Floppy Drive, Internal Clock/Calendar<br>Enhanced Case with Power Supply &<br>101 Key enhanced Key Board |                                      |

## EXPANSION SUPER SALE !!!

| 486DX2-66/486DX-50<br>Local Bus System                                                                                                                                                                                                                                                                                                                                                                                                                   | 486-33/64K w/ Bus Master<br>Local Bus System                                                                                                                                                                                                                                                                                                                                                                                                             | 486DX2-66/486DX-50/486-33<br>ISA System                                                                                                                                                                                                                                                                                                                                                         | 386-40/64K                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Upgradable to DX2-66</li> <li>High Quality Legend Motherboard w/ Super High Speed Jumper</li> <li>486CPU/64K Cache</li> <li>0 MB RAM</li> <li>IDE I/O (2HD/2FD 2S/P/G)</li> <li>1.2MB Floppy Drive</li> <li>1.44MB Floppy Drive</li> <li>130MB Hard Drive</li> <li>SVGA Video Card</li> <li>14" SVGA Monitor 1024x768</li> <li>Mini Tower w Case With 230W Power Supply</li> <li>101 Enhanced Keyboard</li> </ul> | <ul style="list-style-type: none"> <li>Upgradable to DX2-66</li> <li>High Quality Legend Motherboard w/ Super High Speed Jumper</li> <li>486CPU/64K Cache</li> <li>0 MB RAM</li> <li>IDE I/O (2HD/2FD 2S/P/G)</li> <li>1.2MB Floppy Drive</li> <li>1.44MB Floppy Drive</li> <li>130MB Hard Drive</li> <li>SVGA Video Card</li> <li>14" SVGA Monitor 1024x768</li> <li>Mini Tower w Case With 230W Power Supply</li> <li>101 Enhanced Keyboard</li> </ul> | <ul style="list-style-type: none"> <li>High Quality Legend Motherboard</li> <li>486CPU/64K Cache</li> <li>0 MB RAM</li> <li>IDE I/O (2HD/2FD 2S/P/G)</li> <li>1.2MB Floppy Drive</li> <li>1.44MB Floppy Drive</li> <li>130MB Hard Drive</li> <li>SVGA Video Card</li> <li>14" SVGA Monitor 1024x768</li> <li>Mini Tower w Case With 230W Power Supply</li> <li>101 Enhanced Keyboard</li> </ul> | <ul style="list-style-type: none"> <li>386DX-40 CPU/64K cache &amp; Legend Motherboard</li> <li>0 MB RAM</li> <li>IDE I/O (2HD/2FD 2S/P/G)</li> <li>1.2MB Floppy Drive</li> <li>1.44MB Floppy Drive</li> <li>80MB Hard Drive</li> <li>SVGA Video Card</li> <li>14" SVGA Monitor 1024x768</li> <li>Mini Tower Case</li> <li>230W Power Supply</li> <li>101 Enhanced Keyboard</li> <li>Math. Co-processor Socket</li> </ul> |
| <b>\$1115/1052</b>                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>\$ 731</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>\$1095/1032/676</b>                                                                                                                                                                                                                                                                                                                                                                          | <b>\$ 631</b>                                                                                                                                                                                                                                                                                                                                                                                                             |

### MOTHERBOARDS W/ CPU

|                   |              |        |
|-------------------|--------------|--------|
| 486DX2-66/64K VLB | W/BUS MASTER | \$ 605 |
| 486DX50/64K VLB   | W/BUS MASTER | \$ 525 |
| 486/33 W/64K VLB  | W/BUS MASTER | \$ 195 |
| 386/40 W/64K      |              | \$ 125 |

### HARD DRIVES

|                        |        |
|------------------------|--------|
| 170MB (IDE) HARD DRIVE | \$ 179 |
| 210MB (IDE) HARD DRIVE | \$ 205 |
| 250MB (IDE) HARD DRIVE | \$ 225 |
| 340MB (IDE) HARD DRIVE | \$ 295 |

### CD ROM & SOUND CARDS

|                                                       |             |
|-------------------------------------------------------|-------------|
| CD ROM + Sound Card + 2 Stereo Speakers + 9 CD Titles | ONLY \$ 309 |
| MITSUMI CD-ROM (350MS)                                | \$ 175      |
| TOSHIBA CD-ROM (200MS)                                | \$ 385      |
| SOUND CARD                                            | \$ 59       |

### MEMORY & MATH-COPROCESSOR

|                 |         |
|-----------------|---------|
| 1MBX9 SIMM 60NS | \$ CALL |
| 1MBX9 SIMM 70NS | \$ CALL |
| 4MBX9 SIMM 60NS | \$ CALL |
| 4MBX9 SIMM 70NS | \$ CALL |
| 387DX 40/33     | \$ CALL |
| 387SX 33/25/20  | \$ CALL |

### CASE & POWER SUPPLY

|                                |        |
|--------------------------------|--------|
| MINI TOWER W/230W P.S.         | \$ 47  |
| MEDIUM TOWER W/230W P.S.       | \$ 79  |
| FULL TOWER W/250W POWER SUPPLY | \$ 102 |
| DESKTOP CASE W/230 W P.S.      | \$ 51  |

### CD-ROM SOFTWARES

|                   |      |
|-------------------|------|
| MS BOOKSHELF      | CALL |
| CHEST MASTER 3000 | CALL |
| SHERLOCK HOLMES   | CALL |
| US ATLAS          | CALL |
| BEAUTY & BEAST    | CALL |

### VIDEO CARDS & MONITORS

|                                                |        |
|------------------------------------------------|--------|
| TRIDEN 1MB SVGA                                | \$ 54  |
| ATI GRAPHIC ULTRA PRO W.2MB                    | \$ 330 |
| Orchid Fahrenheit VLB                          | \$ 135 |
| 14" SVGA 0.28 MONITOR(1024X768)                | \$ 235 |
| 14" SVGA 0.28 NON-INTERLACE MONITOR (1024X768) | \$ 255 |
| Mono. 14" Monitor                              | \$ 89  |

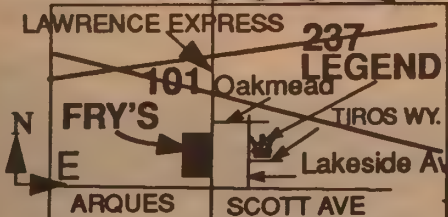
### MISCELLANEOUS

|                                |        |
|--------------------------------|--------|
| 2400 INTERNAL MODEM            | \$ 26  |
| 96/24 FAX/MODEM(WINDOW)        | \$ 47  |
| 14400/14400 FAX/MODEM internal | \$ 143 |
| DC 2120 TAPE                   | \$ 18  |
| COLORADO DJ-10                 | \$ 138 |
| COLORADO DJ-20                 | \$ 176 |
| 3 BUTTON MS COMPATIBLE MOUSE   | \$ 10  |
| MS MOUSE                       | \$ 42  |
| MS DOS 6.0(W/SYS)              | \$ 43  |

MORE AND MORE ARE AVAILABLE!

**Legend  
Computer**

## SUNNYVALE STORE



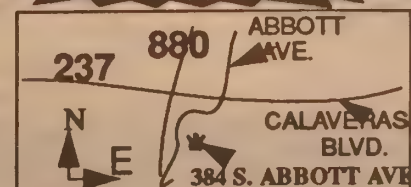
Legend Computer Inc.  
470A LAKESIDE DRIVE  
SUNNYVALE, CA. 94086  
TEL: (408)720-0818  
FAX: (408)720-0819

**Business Hours:**  
Mon-Fri. 9AM-7PM

Sat. 10AM-6PM

## MILPITAS STORE

Legend Computer Inc.  
384 South Abbott AVE.  
MILPITAS, CA. 95035  
TEL: (408)262-6861  
FAX: (408)262-6315



**Business Hours:**  
Mon-Fri. 9AM-6PM

Sat. 10AM-4PM

\* Prices, availability and terms are subject to change without notice

\* Not responsible for typos  
\* Prices Above Reflect Cash Discount



**Last Chance!**  
**While Supplies Last!**  
**Rebates End 9/30**



On-the-spot  
rebates  
On-target  
solutions

**Instant, Big Savings on Apple® Products.**  
See stores for details.



Exceptional processing power at an affordable price.  
**Apple® Macintosh Centris™ 610**

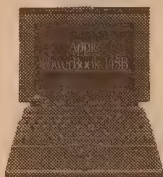
**Built-in CD ROM!**

Keyboard & Monitor Extra

**Limited Supply**  
**\$1999\***

- 8 MB RAM, expand to 68 MB
- 230 MB HD
- CD ROM M1398LL/A

**Save \$300**



Notebook convenience.

Macintosh performance.  
**Apple® Macintosh® PowerBook™ 145B**

The Apple® PowerBook™ 145B computer is designed for those who want solid Macintosh performance and flexibility in a convenient, take-it-anywhere notebook computer.

**\$1329**  
Not a rebate product



**Save \$50**

The ideal entry level personal computer  
**Apple® Macintosh® Classic™ II 4/80**  
• All-in-one design

**Limited Supply**  
**\$949\***



**Save \$50**

The complete color package.  
**Apple® Macintosh® Color Classic™**

- 16-MHz 68030 microprocessor
- 4 MB of RAM, expandable to 10 MB
- 80 MB hard drive

**\$1069\***

**On the Spot Rebate.**  
**On Target Solutions.\***

\*Rebates start June 14, ends September 30, 1993. See stores for details.

©1993. Apple, the Apple logo, LaserWriter, Macintosh and StyleWriter are registered trademarks of Apple Computer, Inc. Macintosh Centris, Macintosh Duo, Macintosh Quadra, System 7, PowerBook Duo, and PowerBook are trademarks of Apple Computer, Inc. Classic is a registered trademark licensed to Apple Computer, Inc. \* Price after Mfg. rebate. While Supplies Last.



**\$229**

Not a rebate product

Laser-quality printing at an affordable price.  
**Apple® StyleWriter® II Printer**

- 360 dots-per-inch resolution for laser-quality printing
- Gray scale printing for sharp graphics
- 39 scalable fonts for printing in any size and a wide range of styles



**\$429**

Not a rebate product

The ideal companion to a PowerBook computer.  
**Apple® Portable StyleWriter® printer**

The Portable StyleWriter weighs only 4.5 pounds, and works with any PowerBook, Apple® Macintosh® computer, using a rechargeable battery or a standard power source. It can print in a horizontal or vertical position, so you can use it in even the most confined spaces, whether you need to print on letterhead, envelopes, labels, or transparencies.



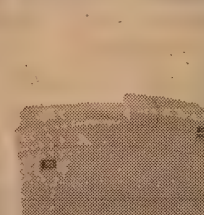
The easy way to make your PowerBook Duo a desktop computer.  
**Apple® Macintosh Duo™ Dock**

**\$899\***

**Save \$150**

The best of both worlds.  
**Apple® Macintosh® PowerBook Duo™ 21**  
• 25-MHz 68030 microprocessor  
• 4 MB of RAM, expandable to 24 MB  
• 80 MB hard drive

**\$1299\***



Not a rebate product

The most affordable advanced laser printer.

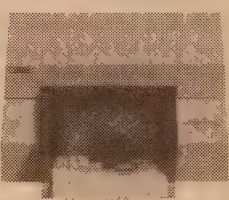
**Apple® LaserWriter® Select 310**

- AMD 29205 RISC processor
- 300 dots-per-inch resolution
- 13 scalable fonts for printing wide range of styles and fonts

**\$969**

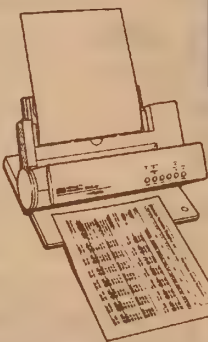
**HP Deskwriter Printer**

Don't settle for less than perfect, professional-looking documents. The Deskwriter prints at a smooth 300 dpi, it's affordable, and it's compatible with AppleTalk® for use with your Apple® Macintosh® personal computer.



**New! Low Prices!**

**\$299.**



**HEWLETT  
PACKARD**

**HP DeskJet Portable Printer**

Now you can take famous DeskJet 300 dpi laser-quality output anywhere. Weighs just 4.4 lbs; prints 3 pages per minute (up to 100 pages on one charge).

**\$75 REBATE**

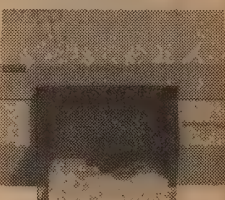
Pictured w/optional cut-sheet feeder.

\* See store for details. Must purchase a Hewlett-Packard Portable Accessory to be eligible.

**EXTENDED  
Ends 10/31/93**

**HP DeskJet 500 Printer**

Get laser-sharp printing from all your DOS and Windows applications at a dot-matrix price. This instant classic inkjet printer from HP works with TrueType or font-scaling software to give you perfect type at any size.

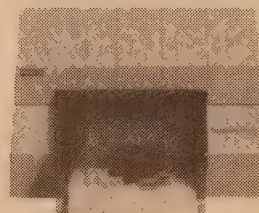


**New! Low Prices!**

**\$299.**

**HP DeskWriter C Printer**

Affordable color in laser-quality printing.



The HP DeskWriter C adds color capacity to an already famous laser quality black output. It's compatible with Apple® Macintosh® personal computers — and your budget.

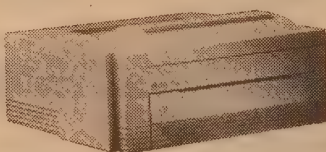
**New! Low Prices!**

**\$399.**

- Laser-quality output in black or in color
- 300 dpi resolution

**HP LaserJet 4L Printer**

A first class printer for the price of coach.



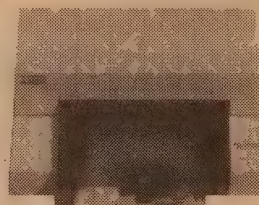
Complete, simple to operate, and affordable, the newest HP LaserJet printer is also the lowest priced HP LaserJet printer...ever!

- 300 dpi resolution
- 26 built-in scalable typefaces

**\$669.**

**HP DeskJet 500C Printer**

Laser-quality color at an affordable price.



Print in beautiful, laser-sharp 300 dpi color on plain paper and transparencies — for less than the cost of a b&w laser printer. Windows-compatible for use with TrueType™ fonts and ATM; 3-year limited warranty.

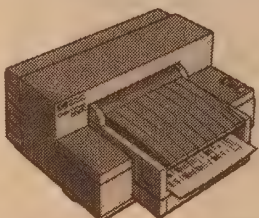
**New! Low Prices!**

**\$399.**

- Laser-quality printing
- 300 dpi resolution

**HP DeskWriter 550C Printer**

Integrated black and color printing that's simple, convenient, and fast.



Perfect for home and small business use where color is important, this reliable printer for use with your Apple® Macintosh® personal computer.

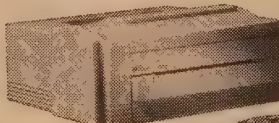
**New! Low Prices!**

**\$599.**

- 300 dpi resolution
- Integrated black and color printing

**HP LaserJet 4 ML Printer**

It fits budgets as well as it fits desktops

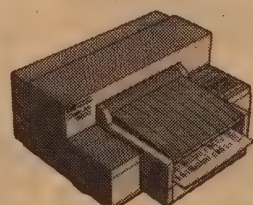


- Lightning fast Intel 80960 18.5 MHz RISC processor • 4 Mb standard memory • EconoMode cuts your toner costs up to 50%

**\$1069.**

**HP DeskJet 550C Printer**

Not just a printer...Help with your printing.



Dual ink cartridge technology delivers laser-quality output in both color and true black from this solid printer for the PC. 3-year mfr's warranty; does envelope and legal-sized paper, too.

**New! Low Prices!**

**\$599.**

- 300 dpi resolution
- Six typefaces and 84 selectable fonts for DOS

**WHOLE EARTH  
ELECTRONICS**

**SAN JOSE: 3530 Stevens Creek Blvd. (between Winchester & San Tomas)**  
**(408) 554-8300 M-F 10am—9pm / Sat-Sun 10am—6pm**





## 3-1/2" HD Floppy Disks



**\$7<sup>99</sup>**

After manufacturers rebate

Top quality high density diskettes with a \$1.00 manufacturers rebate.

## MITAC

### 486 SLC-33 MHz 130 MB HD Notebook

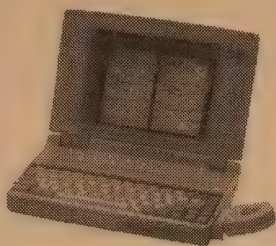
4MB RAM upgradable to 32 MB, Cyrix 486 CPU, socket for math co-processor, 10" LCD 64 shades of gray screen. #40286-130

**\$1799**

## TOSHIBA

The best i486™ notebook for the money

### T1900 Satellite™ Notebook



- Fast i486™ SXA microprocessor running at 20MHz
- 4 MB RAM expandable to 20 MB
- 120 MB hard drive 17 Milisecond access time • High contrast 9.5" mono VGA display

**New!**

**\$1849**

## The New IBM® PS1®



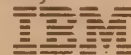
**\$999**

Backed by IBM Service and Support. Consultant 2133G46

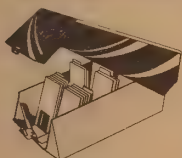
® IBM is a registered trademark of International Business Machines Corp. and is used under license. ®PS/1 is a registered trademark of International Business Machines Corp., Inc. The Intel Inside logo is a trademark of the Intel Corporation

Everything you need comes in one box.

486SX 25 MHz (upgradable to DX2) 85 MB hard drive, 2 MB RAM, 14" VGA color monitor, local bus video, modem, mouse, popular software already loaded.



## Disk Box



Durable case holds 100 3.5" diskettes. Lock and keys provided for security.

**\$2<sup>99</sup>**

## Allsop Dual Drive Cleaner

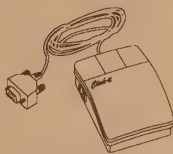


Prevent corruption to your floppies and Data Loss

**\$7<sup>99</sup>**



## Mouse

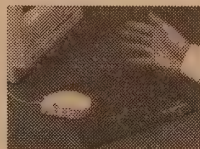


Functional, ergonomic, and the price is right. For DOS and Windows.

**\$10.**



## Hyper Pad

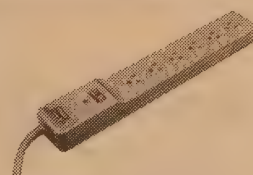


he Hyper Pad offers all the functionality of a standard mouse pad while acting as a fun creativity enhancement tool on your desktop

**\$12<sup>99</sup>**

## KENSINGTON.

### PowerTree 10



Organize your power needs while protecting your system from electrical surges.

**\$19.**



## Notebook Case



Designed to carry a notebook computer, accessories & documents. Constructed of full-grain cowhide. Adjustable padded divider and detachable shoulder strap. #CLN1

**\$39.**



## Power Center



5 outlets surge protection with fax/modem protection. EMI/RFI noise filters and anti-static buttons. #SP-PC20

**39.**



## Panamax MAX6

Don't put a cheap surge protection on your valuable computer. Panamax is the clear choice. High quality surge protection with lifetime warranty that even ensures your computer against any electrical damage. Includes a \$5 million dollar insurance policy; see warranty for details.



**\$59**



## A<sup>3</sup> Mouse



Three buttons provide three times the functionality of other mice. 300 cpi base resolution. Lifetime warranty.

**89.**



## Leather Notebook Case

Specifically designed to carry a notebook style computer, accessories and documents. Constructed of full-grain cowhide. Fully adjustable, padded divider, a detachable shoulder strap and a zippered document holder. #CLN1



**\$99.**



## American Power Conversion

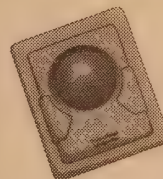
Complete blackout and brownout protection. \$25,000 Downstream equipment guarantee. 250VA Backup protects computers and peripherals from utility line failures and the loss of valuable data. Full suppression, EMI/RFI filtering and audible alarm.



**\$115.**

## KENSINGTON.

### Turbo Mouse 4.0



The Turbo Mouse 4.0 Trackball is the latest generation of Turbo Mouse, winner of more awards than any other Macintosh® input device. Among it's features include a new, advanced Software package which allows the user to customize cursor control, comfortably positioned and easy-to-press buttons, and two ADB ports for chaining other ADB devices. It is System 7.0 compatible and comes with a limited lifetime warranty from Kensington.

**\$119.**



## Number Munchers



Fun-loving Number Munchers are on a mission! The only thing standing between them is the Troggle mastermind, Dr. Frankentroggle. His devious troggles love to eat munchers.

**\$14<sup>99</sup>**



## Prince of Persia



Animated game of the year, with Arabian Nights theme and endlessly challenging levels. DOS

**\$24<sup>99</sup>**



## Oregon Trail



Journey through the Old West via the trail carved in the harsh wilderness by 19th-century pioneers with this classic computer simulation. MAC or DOS

**\$27<sup>99</sup>**



## Bailey's Book House

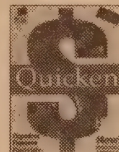


From the specialists in early learning for over 20 years, Bailey's Book House offers an enchanting environment that encourages young children to independently develop early reading skills. MAC or WINDOWS

**\$27<sup>99</sup>**



## Quicken for Macintosh



Track your budget and personal finances, print checks, and more. Ideal for home and small business accounting.

**\$29.**



## Just Grandma & Me



In this endearing story by Mercer Mayer, Little Critter and his Grandma go to the beach where they have a series of exciting adventures.

**\$34<sup>99</sup>**

## Broderbund® Arthurs Teacher Trouble

Based on Marc Brown's popular children's story, this new CD ROM living book features Arthur the aardvark, scores of animations, sound effects, dialogue, and music to enrich the story.



**\$39<sup>99</sup>**



## 7<sup>TH</sup> Guest



The first Interactive Drama™ in a terrifyingly real virtual environment complete with live actors. MAC or WINDOWS

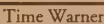
**\$49.**

## Iron Helix

A science fiction thriller that immerses you in a fast paced virtual reality filled with danger and intrigue. CD ROM for Mac.



**\$49<sup>99</sup>**



## Hell Cab

This isn't just another New York cabby. This guy's trying to earn his horns. A Pepe Moreno production on CD ROM for Mac.



**\$59.**



## ClarisWorks



Anything else is just work! ClarisWorks is the new, more integrated solution that offers full-powered word processing, graphics, database, spreadsheet, charting, and communications in less than 600k of disk space.

**\$99.**  
w/CPU purchase

## SPECIAL UPGRADE PRICE!

3 complete products 1 low price!



WordPerfect for Windows 5.2, the world's leading word processor. Paradox® for Windows, the #1 award winning database. Quatro Pro for Windows, #1 award winning spreadsheet. Competitive upgrade for any wordprocessor, database, spreadsheet or presentation program for Windows or DOS.

**\$289.\***  
Free Upgrade to Quatro Pro 5.0 through Borland!

**WHOLE EARTH**

ELECTRONICS

SAN JOSE: 3530 Stevens Creek Blvd. (between Winchester & San Tomas)

(408) 554-8300 M-F 10am-9pm / Sat-Sun 10am-6pm



# BUSINESS SOLUTIONS

the area code from local listings and add a 1 to all distant listings. If you're on the road, however, this method simply will not work. I've found that I dial local listings manually and use the program to dial all other calls. A change to the program could eliminate this problem. HotLine, for instance, knows to place a 1 in front of all nonlocal calls and to omit the area code from local calls.

## BUT WAIT, THERE'S MORE...

I have not done full justice to this program, because I've virtually ignored the calendar and scheduling modules. I found they worked well, but for myself, I find it difficult to improve on pencil and paper for my daily schedule. My own prejudice, however, should not deter anyone from exploring these elements of the program. There are, indeed, sophisticated features that will be helpful to anyone in the habit of using a computer to help with a daily schedule. Call back features, to-do lists that are carried forward from day to day until complet-

People in sales will no  
doubt find that the entire  
program will make their job  
not only easier, but  
more efficient.

ed, and a daily calls list each add to the overall usefulness of this program.

People in sales will no doubt find that the entire program will make their job not only easier, but more efficient. If companies organize a sales force around this software, for instance, there will be complete continuity when an employee leaves, as it will be easy to see what contacts are planned for the future and what has already been done.

If I were inclined to use a computer for my daily scheduling, I would use YourWay because all of the information is built into a single program, so I wouldn't have to switch between programs. I have found it convenient, for instance, to consult the calendar on the computer because it is so easy to find within YourWay.

If you are not currently using your computer for telephone management, you should consider either HotLine for DOS or YourWay for Windows. Either program will simplify your life if you routinely spend time in front of a computer screen. ■

## Efi's

### DISCOUNT COMPUTERS

**3Com®**

**AST**  
RESEARCH INC.

**EVEREX**  
ASSOCIATES OF CALIFORNIA

**Canon**

**SAMSUNG**

**MITSUBISHI**  
ELECTRONICS

**TOSHIBA**

**intel®**

**ZENITH**  
data systems  
Group Inc.

**NEC**

**MEGA**  
Makers of the Benchmark Plus

**Acer**

## JUST A SAMPLE

**LOWEST PRICES ON ALL  
AST PRODUCTS GUARANTEED!**

|                                                                  |          |
|------------------------------------------------------------------|----------|
| AST Notebook 486SL25 w/4MB, 200MB,<br>Mono, Windows, Mouse ..... | \$2389   |
| AST Bravo 486/33, 4MB, 120MB<br>Bundle w/Monitor .....           | 1595     |
| AST Bravo Base 486/33, 2MB .....                                 | 1099     |
| Canon BJ200 .....                                                | 359      |
| Colorado 250MB Trakker .....                                     | 399      |
| Conner 120MB Hard Drive .....                                    | 199      |
| Harvard Graphics 3.0 .....                                       | 339      |
| Okidata OL400 .....                                              | 569      |
| Mouse w/Windows 3.1 .....                                        | 59       |
| 3 Com 3C509 .....                                                | 129      |
| 96/24 Internal Modem .....                                       | 69       |
| Local Bus SVGA Card w/1MB .....                                  | 129      |
| Mitsubishi 17"/20" Monitor .....                                 | 689/1075 |
| SVGA Non-Interlaced Monitor .....                                | 299      |
| Conner 250MB Internal Tape Back-Up<br>w/Cartridge .....          | 189      |

**Prices Reflect A Cash Discount Only**

**TWO User Network Starter Pack**

**FREE!!!**

**with purchase of Ethernet Card**

**altima**

**OKIDATA**

**IBM**

**COMPAQ**

**ALR**

**ALPS**  
AMERICA

**Panasonic**

**EPSON®**

**hp** **HEWLETT  
PACKARD**

**Hayes®**

**CITIZEN**

Fax for inquiries, price bids & purchase orders: (510) 283-1744

Free delivery and installation of systems within 30 miles. Free in-store installation of any product.

**CALL US FOR YOUR PRICE ON ANY PRODUCT.**

HOURS: MON-FRI. 10-6, SAT. 10-2

3441 GOLDEN GATE WAY, LAFAYETTE, CA 94549

**(510) 283-1700**

**CALL BEFORE YOU BUY**

We are actively seeking minority businesses supplying computer products. Please Call!  
Prices may change without notice. 90 day warranty on all products.

## AT OUR CLEARANCE CENTER

|                                                                                                                                                                                             |         |                                                                                                                                                                                            |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 486DX-33Mhz 128K Cache<br>4 MB RAM<br>200 MB HD<br>1.2 & 1.44 floppy drives<br>IDE 2S, 1P, 1G<br>SVGA 1MB video card<br>14" SVGA monitor, 0.28mm<br>101 KB<br>3 button mouse<br>Mini Tower  | \$1,190 | 386DX-40Mhz 64K Cache<br>4 MB RAM<br>107 MB HD<br>1.2 & 1.44 floppy drives<br>IDE 2S, 1P, 1G<br>SVGA 512K video card<br>14" SVGA monitor, 0.39mm<br>101 KB<br>3 button mouse<br>Mini Tower | \$779 |
| 386DX-20Mhz<br>2 MB RAM<br>107 MB HD<br>1.2 & 1.44 floppy drives<br>IDE 2S, 1P, 1G<br>SVGA 512K video card<br>14" SVGA monitor, 0.39mm<br>101 KB<br>3 button mouse<br>Mini Tower or Desktop | \$629   | 386SX-16Mhz<br>1 MB RAM<br>107 MB HD<br>1.44 floppy drives<br>IDE 2S, 1P, 1G<br>SVGA 512K video card<br>14" SVGA monitor, 0.39mm<br>101 KB<br>3 button mouse<br>Mini Tower or Desktop      | \$550 |
| 14" SVGA Monitor 0.28mm                                                                                                                                                                     | \$199   | Mini Tower Case                                                                                                                                                                            | \$45  |
| 14" SVGA Monitor 0.39mm                                                                                                                                                                     | \$179   | Desktop Case                                                                                                                                                                               | \$45  |
| 14" Mono Monitor                                                                                                                                                                            | \$60    | Mouse                                                                                                                                                                                      | \$9   |
| SVGA Card 1MB / 512KB                                                                                                                                                                       | \$42/27 | Trackball + Mouse                                                                                                                                                                          | \$28  |
| 107 MB IDE Hard Disk                                                                                                                                                                        | \$125   | Fax / Modem 14400/14400                                                                                                                                                                    | \$125 |
| FD1.2 / FD1.44                                                                                                                                                                              | \$41/36 | IDE w/ 10 Card                                                                                                                                                                             | \$10  |
| KB101                                                                                                                                                                                       | \$15    | 10 Card                                                                                                                                                                                    | \$10  |
| KB84                                                                                                                                                                                        | \$10    | IDE Card                                                                                                                                                                                   | \$8   |

**S N A P COMPUTER**  
**(510) 796-1883**

35640 Fremont Blvd., Fremont • Fax: (510) 796-7552  
One Block South of Decoto Road  
All items above come with warranty  
Prices Subject to Change Without Notice



# A System That Not Only Works For You, But fits your Budget

## Miracle VLB Systems

- \* 486 DX 256K VLB Motherboard
- \* 4 MB RAM
- \* Desk Top Case /P.S.
- \* IDE / VLB / AT I/O
- \* Teac 1.2MB & 1.44MB
- \* 170 MB Hard Disk
- \* SVGA VLB Card 1MB
- \* 14" NI SVGA Monitor
- \* Keytronic 101 Keyboard

486 DX-33 \$1365

486DX2-66 \$1565

## Micronics VLB

- \* Micronics 486 DX2-66 VLB 256K Cache Motherboard
- \* 8 MB RAM
- \* Mid-Tower Case /P.S.
- \* Teac 1.2MB & 1.44MB
- \* 345 MB Hard Disk
- \* 2 Serial, 1 Parallel
- \* Orchid Fahrenheit VLB 1MB
- \* ViewSonic 15 NI 15" Monitor
- \* Keytronic 101 Keyboard

\$2329

## AMI Enterprise

- \* AMI 486 DX2-66 EISA VLB 256K Cache Motherboard
- \* 16 MB RAM
- \* Full-Tower Case /P.S.
- \* Adaptec 2742T EISA SCSI
- \* Teac 1.2MB & 1.44MB
- \* Fujitsu M2694SA 1.2GB SCSI
- \* 2 Serial, 1 Parallel
- \* ATI Ultra PRO VLB 2MB
- \* Standard 17" Monitor
- \* Keytronic 101 Keyboard

\$4299

## 386 DX System

- \* 4MB RAM
- \* Mini-Tower Case /P.S.
- \* 2 Serial, 1 Parallel
- \* Teac 1.2MB & 1.44MB
- \* 170 MB Hard Disk
- \* 16 Bit SVGA Card
- \* Optiquet 800S 14" Monitor
- \* 101 Keyboard

386 DX-40 128K

\$899

## Orchid VLB

- \* Orchid 486 VLB256K Motherboard
- \* 4 MB RAM
- \* Mid-Tower Case /P.S.
- \* Orchid IDE VLB /IO
- \* Teac 1.2MB & 1.44MB
- \* 345 MB Hard Disk
- \* Orchid Fahrenheit VLB 1MB
- \* ViewSonic 15 NI 15" Monitor
- \* Keytronic 101 Keyboard

486 DX-33 \$1785

486 DX2-66 \$1985

## AMI Super Voyager

- \* AMI 486 DX2-66 ISA VLB 256K Cache Motherboard
- \* 8 MB RAM
- \* Mid-Tower Case /P.S.
- \* Adaptec 2842 VL SCSI
- \* Teac 1.2 MB & 1.44MB
- \* 525 MB SCSI Hard Disk
- \* Orchid Fahrenheit VLB 1 MB
- \* ViewSonic 15 NI 15" Monitor
- \* Keytronic 101 Keyboard

\$3169

## Video Cards

### Diamond

Stealth Pro 2MB VLB \$345

Viper VLB \$395

### Matrox

MGA ULT/2/A \$645

MGA ULT /2/V \$665

MGA IMP/3/A \$982

MGA IMP /3Z/A \$1133

MGA IMP /3/V \$985

MGA Impression 1024 \$695

MGA Impress Ultra \$3210

### Orchid

Fahrenheit 1280 VLB \$139

Celsius w/1MB \$225

P9000 VLB \$395

### STB

PowerGraph VL24 \$179

Pegasus VL VLB \$679

## Monitors

### MAG

MX 15 15" 1280 \$530

MX 17 17" 1280 \$965

### NANAO

F 340i 15" 0.28 dp \$699

F 550i 17" 0.28 dp \$1100

T 660i 17" 0.26 dp \$2499

### NEC

4F Ge 15" 1024 \$695

5F Ge 17" 1024 \$1129

6FG 21" 1280 74 Hz \$2419

### Sony

CDP-1730 17" \$995

GDM-2038 20" \$2399

### ViewSonic

ViewSonic 15 15" \$475

ViewSonic 17 17" \$1055

ViewSonic 20 20" \$1849

## Controllers

### Adaptec

AHA-1542C Kit SCSI \$249

AHA-2742 T SCSI EISA \$379

AHA-1742 A SCSI EISA \$415

AHA-2842VL SCSI \$359

### Buslogic

BT-445S VL SCSI \$249

BT-747S EISA-SCSI \$319

### DTC

2270 IDE/VLB AT I/O \$79

3270 VL SCSI \$135

### Future Domain

TMC 1670 SVP SCSI \$149

TMC 1680 DNK SCSI Kit \$235

### Ultrastor

14F ISA SCSI \$199

24F EISA SCSI \$365

34F VLB SCSI \$275

## Fax / Modem

### Hayes

Ultra V.32 Bis Ext. Fax \$625

Accura V.32 Bis Int Fax \$230

### US Robotics

14.4 K Ext. Fax \$190

14.4 K Int. Fax \$180

## CD-ROM

### NEC

CDR-74-1 Ext. \$545

### Sony

LDU-31A Ext. \$169

### Texel

DM 3024 Int. \$375

DM 5024 Ext. \$475

### Toshiba

3401 Int. \$399

3401 Ext. \$455

**MIRACLE**  
COMPUTERS, INC. SINCE 1985

For Order Call:

1-800-446-9929

780 MONTAGUE EXPWAY, SUITE 202  
SAN JOSE, CA 95131

Government & Corporate P.O.S Welcome

Prices Reflect C.O.D. Cash

M-F 9:00-5:30 Sat 10:00-4:00

TEL: (408)435-8177

FAX: (408)435-8179



# Newton





# Very Personal Computing

## Pocket-Sized MessagePad Adapts To Its Users

By Mary Eisenhart

Photos: Michael Jay

After roughly six years of brainstorming, false starts, paradigm shifts, and all-nighters, Apple's long-awaited and much-ballyhooed Newton MessagePad debuted August 2 at Macworld Expo in Boston. The MessagePad is expected to be the first of many devices—envisioned in one promotional brochure as encompassing everything from wristwatch-sized data entry pads to refrigerator-mounted family message centers to classroom-sized digital whiteboards—which utilize the long-awaited and technologically advanced Newton technology.

The devices won't all come from Apple. In a major departure from its historic lock-up-the-crown-jewels strategy, Apple is encouraging outside hardware developers to license the technology and build their own Newtons. As all the available MessagePads were quickly snapped up at the rollout (by the time you read this, they should be available at dealers nationwide) some eager buyers found solace in Sharp's version.

When the Macintosh was unveiled in 1984, it included bundled software (MacWrite and MacPaint) to showcase its unprecedented capabilities. In similar fashion, the MessagePad comes with built-in applications and communications tools. Its handwriting recognition, much of it the work of a Russian software house called Paragraph, recognizes both cursive and printed handwriting and "learns" the individual user's idiosyncrasies (initial reports seemed to range from delight, usually among people with neat handwriting, to frustration, usually from people with messy handwriting). Information can be gathered, stored, and formatted in free-form fashion, with "ink" handwriting, printed text, and graphics in the same page; it can be organized in calendars, names files, and to-do lists. Using built-in infrared technology, it can even be "beamed" to other Newton or Sharp Wizard users in the same location.

It supports a wide range of industry-standard printers, fax machines, and modems, and, with the upcoming release of the Newton Connection Kits, can exchange data with Macintosh and Windows computers—indeed, with the Pro version of the kits, place and synchronize the data in appropriate desktop applications. And, with a host of outside products coming along in PCMCIA and other formats, it can quickly be configured as a highly specialized tool for the particular needs of each user.

Philip Ivanier, manager of the Developer Relations Group for PIE (Apple's Personal Interactive Electronics division, which includes Newton), notes with satisfaction that the new platform is attracting great interest from software developers, from industry giants like Oracle to startups developing their first product, as well as in-house developers in large corporations, special-purpose

system integrators, and ISVs. "We've worked with two hundred or so integrators and developers thus far, bringing them on campus and teaching them to write Newton applications. In a matter of six weeks or so we've seen in excess of thirty different applications being demoed at our intro, which is more new third-party applications being shown for a new platform at intro than had ever been shown before. Developers see this as a great opportunity—a new platform, new beginning, some new abilities to do some new things they've never been able to do before."

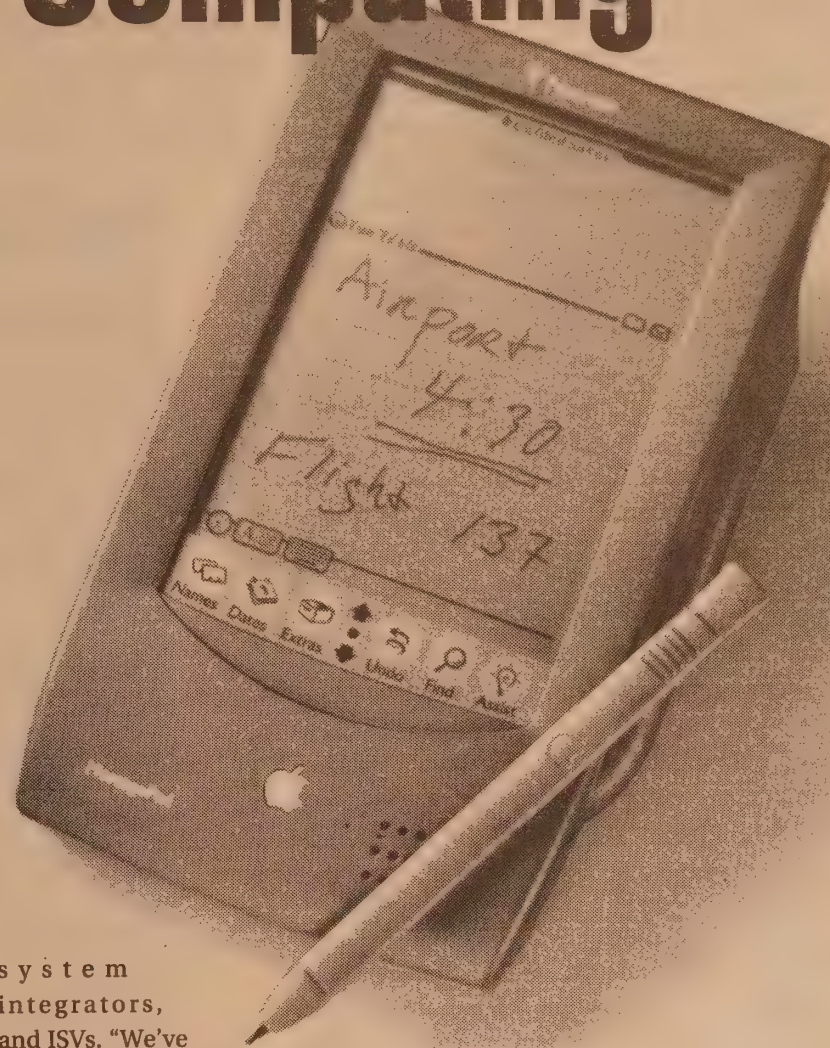
Newton's operating environment includes some novel features. All stored information is available to all Newton's applications, suspended in what its designers call a "data soup," allowing users quick and easy access to whatever's needed. Additionally, its "intelligent assistance" feature lets the machine learn its user's work habits and anticipate frequently performed operations, so that the handwritten message "fax Bob" might bring up a listing of all the Bobs in the database and present the appropriate templates and menus for faxed messages.

As the virtual dust from the rollout was settling, we visited Donna Auguste, manager of Newton Software, and software wizard Steve Capps (known to Mac veterans as the author of the original Finder) of the Advanced Products Group, in Apple's new R&D center.

**This is not a small, portable Macintosh; it's a radically different thing. What were you trying to achieve—what did you think needed doing that couldn't foreseeably be done with a Mac?**

**Donna Auguste:** It's a very different orientation. What we were trying to do was create something that was largely a communication device, and largely a helping device, or an assistant. In doing that, we wanted to give people something that's very easy to use, very fluid and very mobile, so they could always have it with them if they choose to.

But also, very adaptive, so as you use it and spend time with it, it becomes





more a reflection of the way that you do things of your own, the way that you communicate, the way you work on a day-to-day basis. This is a fundamentally unique perspective that we took from the start, in terms of the design of the system.

The technologies that had been investigated by some very talented people for a long time just came into play as we tried to put the pieces together to accomplish that.

**Where do the various bits of technology come from? The processor came from your joint venture with Acorn, and a lot of the handwriting recognition came from Paragraph...**

**Steve Capps:** Pretty much the rest of it came from inside Apple. All along, if somebody outside or somebody in another part of Apple had some interesting technology, we'd talk to them. And obviously, from Apple people, we'd steal what we could, because there's no sense not taking advantage of other people's hard work.

There are many companies which shall go nameless that we've dealt with here and there, trying to take advantage of their stuff, but it didn't work out. We weren't trying to invent everything here; Paragraph and a couple of other companies had some interesting handwriting technologies. We evaluated them, and Paragraph definitely came out the clear winner in terms of walk-up performance, so people could use it and not have to train it, not have to sit there and go through a lengthy process. It does get better with a person's use, but it has great walk-up performance, which is very important when somebody walks into a store and tries to use it.

We started this project with a clean sheet of paper. Starting from scratch was the hard part, and it took us many years to get enough critical mass on a piece of paper to ramp the other engineers up and get something we felt was a product.

At the stage where press first started seeing it, the ideas were already pretty jelled. The code obviously wasn't. By doing lots of user tests, lots of experimentation, you refine it, rewrite stuff.

But most of what I'm talking about is what we saw before that stage, when we bit off more than we could chew, going down many false leads—all the good things that you do when you experiment. We have the scars from all that.

What you first saw with the press and what we finally shipped—conceptually it's very, very similar. The product at that point had been pretty well defined—it just was a *mere* question of implementing it. Which was very difficult.

When you take the mindset of just adding handwriting to an existing platform, like making a pen Mac or a pen Windows, you end up getting lost. "I do this with a mouse—how do I do the equivalent with a pen?" Or, what's even worse, especially with Windows, "I do this with a keyboard"—because Windows is very strongly keyboard-based—"how do I do this with a pen?" You use Windows, you always have DOS lurking underneath it. You use Pen Windows, you always have keyboard-based Windows, mouse-based Windows, and DOS lurking underneath it, so you're just adding more and more layers of an artificial superstructure that you really don't need.

There's advantages of making a pen Windows or a

pen Macintosh, but there's a lot of baggage, both literal and emotional baggage, that we get by doing that.

What's worse is your customers say, "I've got my Excel macros and I have to be able to run that; I have PageMaker and I'd die without PageMaker." They don't understand that PageMaker on a screen that's 3 x 5 inches doesn't make a lot of sense.

**We kind of saw that movie with the Mac and the Apple II.**

Yeah, exactly. "I can't run my favorite Choplifter game that I ran on my Apple II."

**Steve Capps: "We started this project with a clean sheet of paper. Starting from scratch was the hard part, and it took us many years to get enough critical mass on a piece of paper to ramp the other engineers up and get something we felt was a product."**

So anyway, by pushing reset we gained a lot of freedom there.

**DA:** One of the other things that's different between this system and some other systems is that in the Newton system all the information is stored—users put their data in, data they want to be able to communicate, and give to other people, and add to, and enhance with information coming in from other people. You want to take it and put it into a relatively rich structure, as opposed to just a relatively flat structure.

With a rich structure in place, you have a lot of different applications that can access the same information. You don't have to go and swap context and bring in another application with this data. You have a set of information with all the links and relationships in place, and lots of applications can see, with different viewpoints, that same set of information, and share.

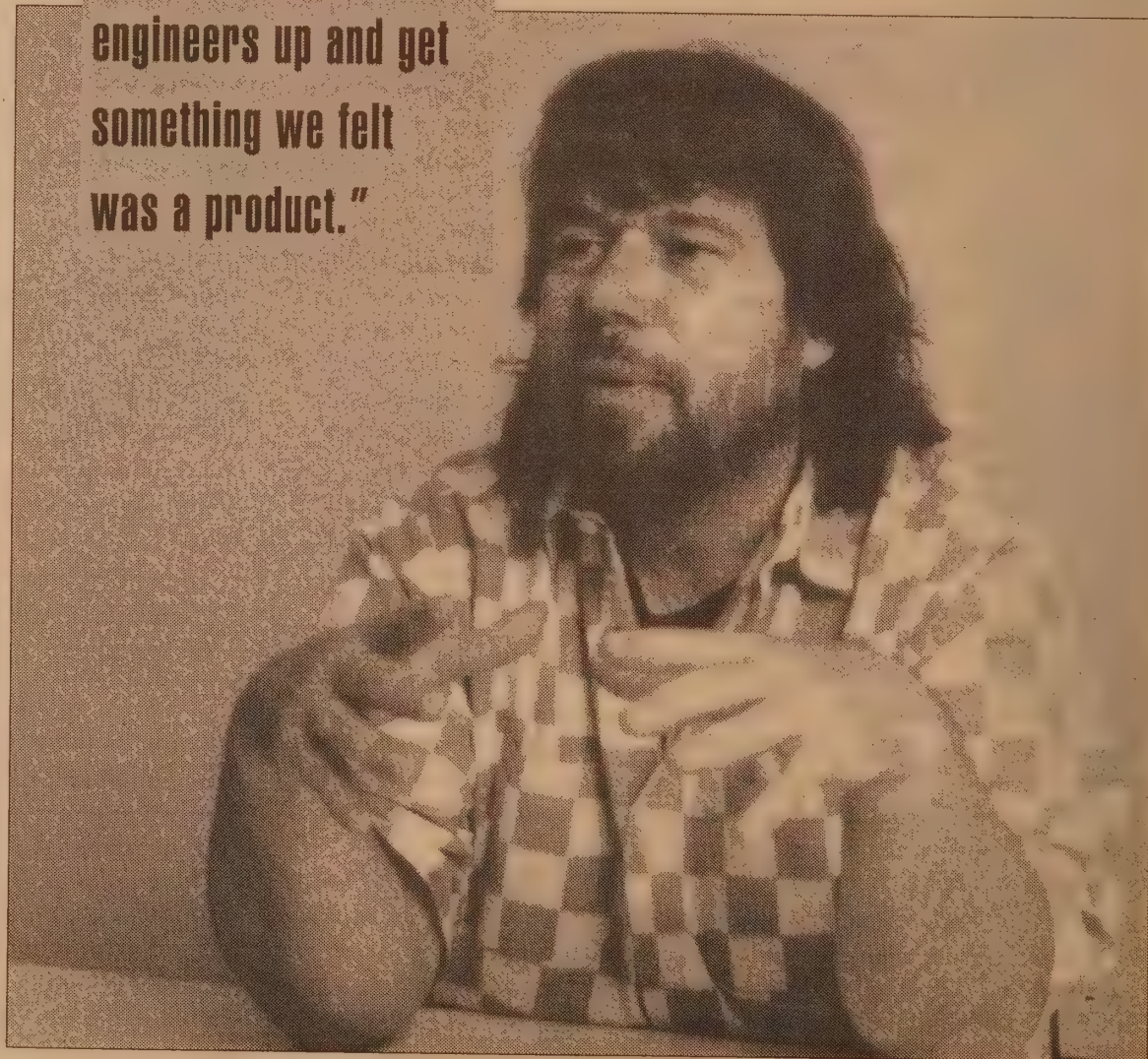
By having put that structure in place with that information, and making it more like a knowledge representation as opposed to flat data, we can leverage it for things like Newton Intelligence.

Newton Intelligence is based on the notion that if the user has put some information in the system, and wants to act on it or do some action that takes advantage of it, we'll try to understand or guess as much as we can about that action or that task.

**For example...**

**SC:** Say you had a group of people you worked with, and had messages like "eat at 3." You sit down at a Newton today, and you want to write a very short message. My message is "Meet me."

So I write "Bob," and it says, "I understand what 'Bob' is"—it kicks in the intelligence, it looks up all





# "The Ultimate Multimedia Experience"

## NEW Media COMPUTER

### THANK YOU

In May of 1993 a new type of Computer MultiMedia store was opened in Fremont California.

Dedicated to the principles of Total Quality Service, and Exceeding Customer's Expectations, the company decided that a computer shopper should be treated as a friend, not as a criminal - a revolutionary concept to anyone who has ever been almost strip searched when leaving a computer superstore.

A staff was gathered from companies such as Egghead and Prodigy, as well as top-notch computer hardware stores, and the above principles were put into place.

Today thanks to you and after only 4 months, a new success story has been written in Silicon Valley.

The New Media Computer team would like to thank everyone who gave us an opportunity to serve them, and who helped make us successful.

To those who have not had a chance to visit us before, please stop by and let us earn your business with competitive prices, and great service.

Thank you,

The New Media Team

### TRY BEFORE YOU BUY!!

Let our friendly & knowledgeable staff help you!

#### CD-ROM DRIVES

|                                   |       |
|-----------------------------------|-------|
| Sony Internal                     | \$149 |
| Toshiba Internal                  |       |
| SCSI Model 3101B                  | 179   |
| Panasonic Internal                |       |
| Model CD562                       | 249   |
| with Interface Card               | 269   |
| Toshiba Internal SCSI Model 3401B |       |
| 200ms Super Fast Multispeed       | 399   |

#### SOUND CARDS

|                             |      |
|-----------------------------|------|
| Sound Blaster Deluxe        | \$78 |
| Pro Audio Spectrum 16 Basic | 129  |
| Logitech Soundman 16        | 129  |
| Labtec Speakers             | 16   |

#### HARD DRIVES

|                           |       |
|---------------------------|-------|
| Conner 174MB IDE          | \$174 |
| Maxtor 245MB IDE          | 219   |
| Quantum 245MB IDE         | 235   |
| Quantum 245MB SCSI        | 239   |
| Quantum 245 SCSI Ext.     | 339   |
| Western Digital 340MB IDE | 279   |
| Conner 340MB IDE          | 288   |

#### TAPE BACKUPS

|                                  |      |
|----------------------------------|------|
| CMS 120MB w/Interface & Software | \$98 |
| Colorado 250MB Int.              | 169  |

### MULTIMEDIA KITS

#### Sound Galaxy Upgrade Kit

- Stereo Sound Card
- Internal CD ROM Drive
- Microphone
- Stereo Speakers
- 3 popular CD-ROM Titles

\$299.95

#### Fusion Double CD-16 Kit

- 16 Bit Stereo Sound Card
- Double Speed CD-ROM Drive
- SCSI Interface
- Kodak Photo CD Compatible
- Includes: Comptons Ency. 7th Guest Battle Chess Arthur Teachers Trouble

\$638.95

### FAX/MODEMS

|                 |       |
|-----------------|-------|
| US-ROBOTICS     |       |
| 14.400 Internal | \$159 |

|                 |       |
|-----------------|-------|
| US-ROBOTICS     |       |
| 14.400 External | \$179 |

|                           |       |
|---------------------------|-------|
| VIDEO CARDS               |       |
| Diamond SpeedStar Pro     | \$109 |
| Diamond SpeedStar Pro VLB | 115   |

|                   |      |
|-------------------|------|
| FLOPPY DRIVES     |      |
| Teac 1.44 3.5"    | \$42 |
| Toshiba 2.08 3.5" | 59   |
| Epson 1.2 5.25"   | 49   |
| Teac Dual Media   | 129  |

### COMPUTER CASES

|            |      |
|------------|------|
| Mini Tower | \$49 |
| Desktop    | 49   |
| Mid Tower  | 79   |
| Full Tower | 99   |

### MOTHERBOARDS

|               |      |
|---------------|------|
| 386SX-25      | \$79 |
| 386DX-40 128K | 149  |
| 486SX-25      | 179  |
| IBM 486-50SLC | 299  |

OVER 350 CD-ROM TITLES IN STOCK!

### CD-ROM PRICE

|                                        |         |
|----------------------------------------|---------|
| Action! Instant MM Presentations       | \$34.99 |
| About Cows                             | \$34.99 |
| Adobe Type on Call (MAC)               | \$71.99 |
| Aircraft Encyclopedia                  | \$39.99 |
| Amanda Stories                         | \$44.99 |
| America Alive I (MAC)                  | \$84.99 |
| American 1991 Business Phonebook       | \$19.99 |
| Anecdotes                              | \$24.99 |
| Annabel's Dreams                       | \$69.99 |
| Animals! v.1.0 San Diego Zoo           | \$24.99 |
| Animation Festival                     | \$29.99 |
| Arthur Teacher Troubles                | \$29.99 |
| Arthur Teacher Troubles (MAC)          | \$49.99 |
| Audobon Birds                          | \$31.99 |
| Audobon's Mammals                      | \$34.99 |
| B-17 Flying Fortress/Silent Service II | \$44.99 |
| Barney Bear Goes to School             | \$29.99 |
| Barney Bear Goes to Space              | \$29.99 |
| Battle Chess                           | \$24.99 |
| Battle Chess (Enhanced)                | \$34.99 |
| Beauty & the Beast                     | \$39.99 |
| Beethoven (MAC)                        | \$45.99 |
| Beethoven String Quartet (MAC)         | \$44.99 |
| Beyond the Wall of Stars               | \$54.99 |
| Bible Library                          | \$39.99 |
| Bibles & Religion                      | \$14.99 |
| Bicycle CD ROM Collection              | \$39.99 |
| Blue Force                             | \$49.99 |
| Brain Drain                            | \$19.99 |
| Britannica Family Choice               | \$29.99 |
| Business & Economics Atlas             | \$34.99 |
| Business Master                        | \$24.99 |
| Buzz Aldrin's Space                    | \$59.99 |
| California Collection                  | \$19.99 |
| California Traveling                   | \$44.99 |
| Career Opportunities                   | \$34.99 |
| Carmen San Diego Deluxe                | \$44.99 |
| CD 7 System 7 Super CD (MAC)           | \$79.99 |
| CD - Deluxe Pak (Chess, US/WLD/Mavis)  | \$49.99 |
| CD Game Collection                     | \$29.99 |
| CD - Game Pack 2                       | \$34.99 |
| CD Winbox MPC/DOS                      | \$19.99 |
| CIA World Fact Book                    | \$34.99 |
| CICA Windows                           | \$19.99 |
| ChessManiac 5 Billion                  | \$44.99 |
| ChessMaster 3000 MPC                   | \$24.99 |
| Cinemania                              | \$58.99 |

|                                        |         |
|----------------------------------------|---------|
| ClipArt Goliath                        | \$22.99 |
| ClipArt Heaven                         | \$39.99 |
| Coates Art Review: Impressionism       | \$39.99 |
| Colossal Cookbook JC                   | \$24.99 |
| Complete Bookshop                      | \$24.99 |
| Complete Works (S. Holmes/Shakespeare) | \$39.99 |
| Composer Quest                         | \$49.99 |
| Conan the Cimmerian                    | \$44.99 |
| Consumer Information                   | \$39.99 |
| Cosmic Orson (MAC)                     | \$44.99 |
| Curse of Enchantia                     | \$34.99 |
| Danger Hot Stuff                       | \$34.99 |
| Danger, Hot Stuff II                   | \$34.99 |
| Deathstar Arcade Battle                | \$19.99 |
| Desert Storm                           | \$34.99 |
| Desert Storm (MAC)                     | \$34.99 |
| Desktop Publishing v.2.0 (MAC)         | \$39.99 |
| Dictionaries & Languages               | \$19.99 |
| Dictionary of the Living World         | \$49.99 |
| Dinosaur Adventure                     | \$54.99 |
| Dinosaur! MM Encyclopedia              | \$64.99 |
| Dinosaur! MM Encyclopedia (MAC)        | \$64.99 |
| Don Quixote                            | \$39.99 |
| Dr. Music                              | \$24.99 |
| Dr. Windows                            | \$24.99 |
| DTP Pro ClipArt FM-Wave (DOS/MAC)      | \$39.99 |
| Dune                                   | \$64.99 |
| EcoQuest 1: Search for Cetus           | \$54.99 |
| Education Master                       | \$29.99 |
| Electricity & Magnetism                | \$39.99 |
| Electronic Library of Art IV           | \$49.99 |
| Encyclopedia of Sound                  | \$14.99 |
| European Monarchs                      | \$39.99 |
| Euro Racers                            | \$49.99 |
| Eye of the Beholder II                 | \$54.99 |
| FI17A/F15 II w/scenario                | \$49.99 |
| Family Doctor (DOS/MAC)                | \$44.99 |
| Family Education Collection            | \$34.99 |
| Fly & Drive Spectacular                | \$44.99 |
| Fonts for the Professional             | \$39.99 |
| Font Master 1                          | \$29.99 |
| Font Master 2                          | \$34.99 |
| Food Analyst                           | \$39.99 |
| Fresh Air                              | \$39.99 |
| From Alice to Ocean                    | \$37.99 |
| Futura                                 | \$19.99 |
| Game Master                            | \$34.99 |
| Gameware                               | \$29.99 |

|                                     |         |
|-------------------------------------|---------|
| Garbo's MS DOS Files                | \$19.99 |
| GeoVision                           | \$29.99 |
| Gifs Galore                         | \$19.99 |
| Giddy Gold                          | \$39.99 |
| Global Explorer                     | \$94.99 |
| Goferswinkle's Adventures           | \$39.99 |
| Great Cities Vol. 1                 | \$48.99 |
| Great Cities Vol. 2                 | \$49.99 |
| Great Wonders of the World Vol. 1   | \$49.99 |
| Grolier New Multimedia Encyclopedia | \$88.99 |
| Guinness MPC '92 Disc of Records    | \$42.99 |
| HAM Radio                           | \$19.99 |
| Hann Call                           | \$49.99 |
| HellCab (MAC)                       | \$69.99 |
| History of the World                | \$54.99 |
| Home Remedies                       | \$34.99 |
| Hot News                            | \$34.99 |
| House of Games                      | \$29.99 |
| Inca                                | \$49.99 |
| Indiana Jones: Fate of Atlantis     | \$49.99 |
| Inspector Gadget                    | \$44.99 |
| Int'l Business Atlas                | \$29.99 |
| Int'l Graphics Library (MAC)        | \$39.99 |
| Interactive Storytime 1             | \$39.99 |
| Interactive Storytime 2             | \$39.99 |
| It's a Bird's Life: Shelly Duvall   | \$54.99 |
| Jets & Props                        | \$34.99 |
| Jones in the Fast Lane              | \$34.99 |
| Journeymen Project (MAC)            | \$69.99 |
| Jungle Books, The:                  |         |
| Mowgli's Brother                    | \$39.99 |
| Just Grandma and Me (MAC)           | \$49.99 |
| Just Grandma and Me                 | \$49.99 |
| Jutland                             | \$54.99 |
| Kao's Hunting                       | \$34.99 |
| KGB World Fact Book                 | \$34.99 |
| Kings Quest V                       | \$34.99 |
| Kings Quest VI                      | \$54.99 |
| Klotski                             | \$24.99 |
| Kodak Photo Access CD               | \$29.99 |
| Language Discovery                  | \$39.99 |
| Laura Bow - Dagger of Amon Ra       | \$49.99 |
| Lets Play                           | \$19.99 |
| Learn to Speak Spanish              | \$69.99 |
| Library of the Future - 1st Edition | \$49.99 |
| Links Collectors CD                 | \$44.99 |
| Lion Shareware                      | \$39.99 |
| Loom CD                             | \$24.99 |
| Lord of the Rings                   | \$54.99 |
| Last Treasures of Infocom           | \$44.99 |

### ADVANCED MULTI-MEDIA SYSTEM

- Intel 486DX-33 w/128K Cache
- 4MB RAM
- 212MB Hard Drive
- Toshiba 3401B CD-ROM Drive
- Pro Audio Spectrum 16 Sound Card
- 1MB SVGA Windows Accelerator Card
- 14" SVGA Monitor .28 Non-Interlaced
- 25W Speakers
- 1.44MB 3.5" Floppy Drive
- 1.2MB 5.25" Floppy Drive
- 2 Serial, 1 Parallel, 1 Game Port
- Mid-Tower Case w/Door - 220W PS
- 101 Enhanced Keyboard
- 3 Button MS Compatible Mouse

\$2065

LARGE SELECTION  
OF MATURE  
CD-ROM TITLES  
AVAILABLE!

### STARTER MULTI-MEDIA SYSTEM

- AMD 386DX-40 w/128K Cache
- 4MB RAM
- 212MB Hard Drive
- Mitsumi CD-ROM Drive
- Sound Blaster Clone Card
- 1MB SVGA Card
- 14" SVGA Monitor .28 Non-Interlaced
- Labtec Speakers
- 1.44MB 3.5" Floppy Drive
- 1.2MB 5.25" Floppy Drive
- 2 Serial, 1 Parallel, 1 Game Port
- Mid-Tower Case w/Door - 220W PS
- 101 Enhanced Keyboard
- 3 Button MS Compatible Mouse

\$1399

### YOUR EQUIPMENT IS A REAL STEAL WITHOUT SONICPRO™!

Sonicpro is a programmable burglar alarm for your computer with theft insurance protection policy. Built-in motion detector microprocessor emits a loud siren whenever there is unauthorized movement of the equipment. You customize the alarm's sensitivity, its duration, and delay. Includes 3 Year \$5,000 theft insurance policy.

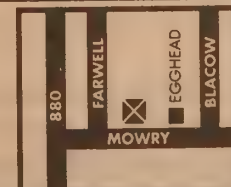
Only \$64.95

CALL FOR ALPHABET TITLES M-Z NOT LISTED

**NEW Media**  
COMPUTER

5201 Mowry Ave.  
Fremont, CA 94538  
(510) 494-0188  
FAX (510) 494-1488

STORE HOURS:  
Mon-Fri 9-8  
Sat 9-7 • Sun 10-6



Not responsible for typographical errors  
Prices may change without notice  
Quantities may be limited

• CORPORATE CUSTOMERS WELCOMED • CALL FOR 100'S OF PRODUCTS NOT LISTED



the Bobs I know, it gives me a choice of the Bobs. So I can pick the Bob, and then I say, "send the message."

When I wrote my application, I didn't have to worry about how to store names, where to put this information. In fact I didn't even have to program this thing—this is all built in. To write this application, all I had to do was take an existent piece of the Newton, put it into the form that lets you write in a name, put in a little form that says "put the message," and then I just have to write ten lines of code that know how to send this message.

It can drag out of the names database the person's email address, the phone numbers, whatever parts I wanted.

I actually started to write this once on the Macintosh. On the Macintosh, there is no unified data of names. There's no database. In my Macintosh, I have a HyperCard stack that has people's names in it. I have a contact manager with people's names in it. I have names all over the place. So I had to write my own names management piece of software. Here it's all together.

What's so cool is that application developers get access to this, and don't have to worry about "How am I going to store names?" That's already taken care of for you. But let's say you have a special way of addressing email in your company—well, you can just add to this data easily. For somebody else, it may be their astrological sign.

By having this unified data that's shared, you get a much more powerful environment to write applications in, and it's much easier. This application took about an hour to write on the Newton. On Macintosh I got the window up, and that's about it.

If developers can do custom apps much easier, it makes everybody's life as a consumer and a user much better, because you don't want to sit there and think, "Well, I'll use that stock program, but it's overkill for what I really want." You can whip together these little apps that are exactly the way you want.

#### **When you say "you," do you mean the average user, or the developer?**

The HyperCard-type developer could do this without even breathing hard.

**DA:** For the end-user, what it means is that when they have a Newton application, on one of these PCMCIA cards, they bought it because they were going to use this particular Newton. Later, when we've taken the technology and done a lot more different things based on that same technology, everything that uses that Newton information at that level and up, like these applications would, can run on things that use Newton technology underneath.

So we take this and we create different forms, different ideas, different concepts of products, but based on the same underlying information structure and the same toolbox. A lot of those apps will be able to run across those platforms.

**Okay, this is really neat, but I've got half my life on my two Macs. Clearly, as you said, PageMaker is not a fit for this hardware, but sometimes you're going to want to take the information in Newton and move it into PageMaker.**

**DA:** The idea of Newton Connection is that you can exchange information between the Newton and the desktop. The whole idea of being a communication device means that you have to be able to go outside of this device very easily to bring information in and send information out. Supporting things like faxing and printing is part of being a communication device; but also, a large part of that is supporting ready exchange of data with the Macintosh and with the PC. Newton Connection runs on Macintosh and runs on Windows; you can upload and download stuff, you can synchronize

information between this Newton and the desktop.

**SC:** You want the nerd angle to all this?

**Please.**

Okay, another good thing about all this is—here I'm writing an application, and I'm adding, like, a WELL address to the concept of a person. That will automatically get uploaded, that's preassembled.

But let's say I'm an astrologer, and I've got some kind of special database my application needs. With no work from the developer, that will automatically get uploaded to your desktop machine; but what's cool about it is you can edit it in both places.

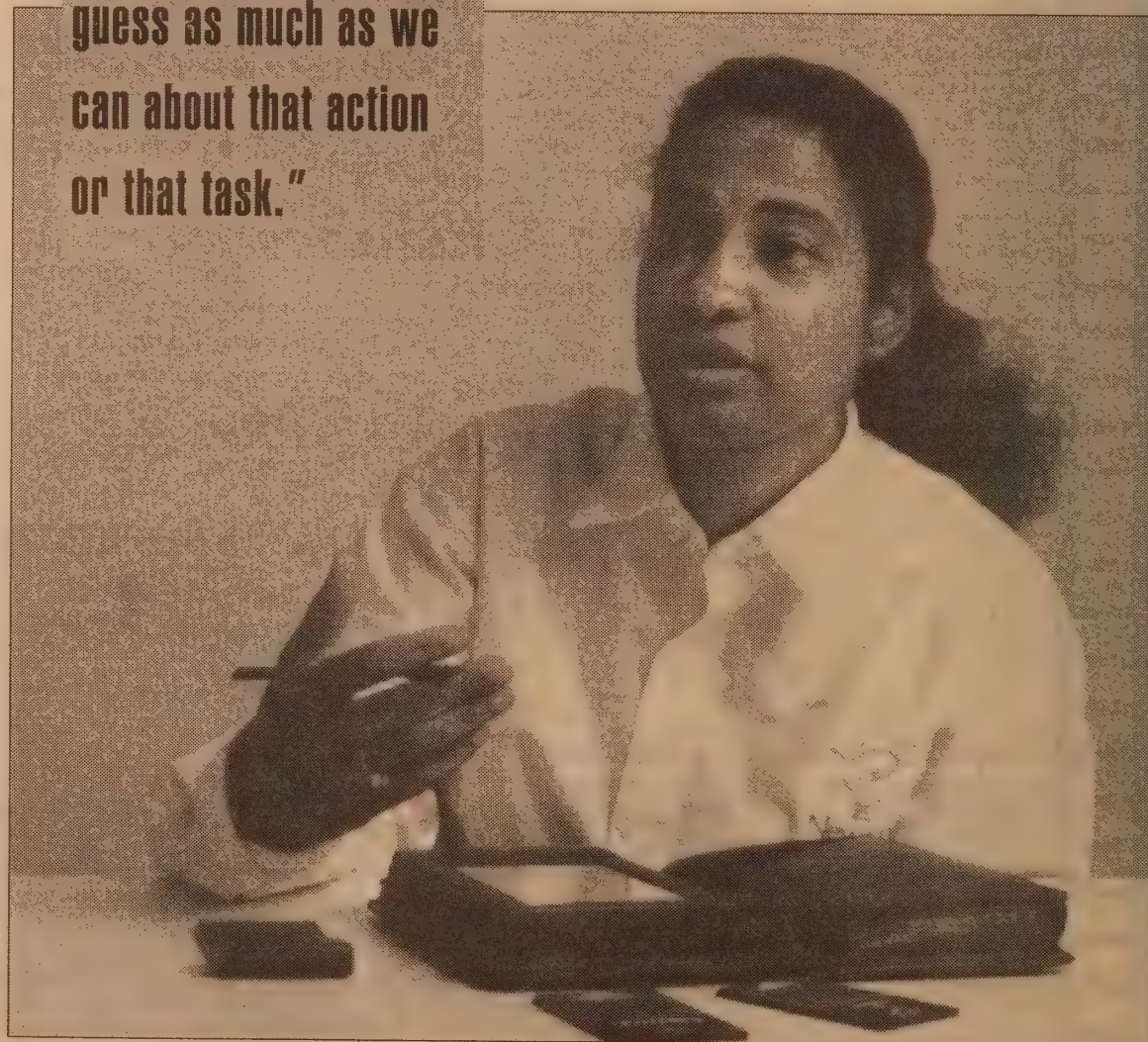
Say it's Astrology Inc., and you can come in and get your horoscope while you wait. They could be sitting there on their desktop machine doing the forecast for this person; when I come in with my Newton, because I'm out there in the field doing the field horoscopes, I can synchronize up and I can see what you told this person the last time. With zero work from the developer, the data is automatically shared and editable on both sides, and that's very useful.

With the Connection Pro you can use Apple Events to take information out of the connection program and share it amongst desktop programs.

One of the cool things a third-party developer showed at the rollout—they really get the idea of Newton, which is that you write down "Hertz \$59," and you click the Assistant button.

If I were doing your expenses on a handwritten form, you would just say, "Hertz \$59," and I'd go, "Oh, Hertz. Car rental." And I'd go to the slot that says "Car rental" on the form, and fill it in. When you as a desktop computer user say, "Oh, I like my desktop machine because I can fill out the form directly"—well, you have to futz, and you have to go figure out

**Donna Auguste:**  
"Newton Intelligence is based on the notion that if the user has put some information in the system, and wants to act on it or do some action that takes advantage of it, we'll try to understand or guess as much as we can about that action or that task."





where the car rental is, what date it is, all this stuff.

So what these guys have done is, you write "Hertz \$59," click the Assistant, it comes up and says, "Oh, this is a car rental. We're assuming you mean today because you're doing it today, but you can also change that." And when you hit OK it will record that. When you dock to the desktop computer, it pulls that data out and uses Apple Events to go throw it in, however you manage your expenses. So if you use Excel, and you have named fields in Excel, it will be able to find a Car Rental field and go "Boom!" and paste it in.

It sounds kind of mundane, but when you think about all the steps that it gets rid of...

Computers have been this wonderful way of making us do a lot of data processing. They don't do it down in some basement place any more; you don't hand your receipts to somebody and they just disappear; we all do it now. What we try to do with Newton is make it so much simpler—"How many times do I have to tell you that Hertz is a car rental?" Really, once. We all assume Hertz will be around for a while; in fact the third party has figured that out, and we never have to say that it's a car rental. They understand the major hotel chains, airfare, car rental, things like that.

You just take a little bit of intelligence and apply it across the board, and suddenly things get really fun. The whole shtick about computers up to now has been "How do I make it easier for you to do your work?" And what we're trying to say is "How do you make it easier to get stuff done?"

We could throw the best user interface in the world at you to make you do all the steps. Word processors and PageMaker made it fun that you do a lot of work to get beautiful-looking things. Well, why not make the computer do a little more work, and still get beautiful-looking things?

That's kind of the direction we're going—you don't fuss with margins and fuss with fonts, you just say, "I want it to look good like this," and you point it to a format, and we go out and try to format it to match that.

**DA:** So the customer's doing more of the little note-taking things, little pieces of information, like you do when you're traveling and you wind up coming back from your trip with this pocketful of little pieces of paper and little receipts and notes, and you're trying to figure out what was what day and what was happening. Doing that in Newton means the system is going to take that stuff for you and try to do as much as it can to process that into the same file format. It's more like what you see a lot of people doing, when they're doing note-taking and organizing of their own.

**At what point did you get users involved in testing this? What happened when outside people started getting involved?**

**SC:** Early on, you start bringing your friends and spouses, that kind of thing, in. You're at home working and you say, "Hey, what do you think of this?" and they give you this blank look and you go, "Oops!" But they've been involved since literally the very first few months.

**DA:** From the time we were trying to figure out what stylus to use.

**SC:** It's kind of funny—you have to be 100% empirical when it comes to users. You can't theorize. You gain experience, but it's all measured. You cannot prove a hypothesis at all. Whenever you deal with users, you must be prepared to be completely humble, constantly.

**Who needs this right now?**

**SC:** Like Donna just said—say you just paid your car bill, you're not going to whip out your PowerBook and say, "Just a minute, I'm getting it into Excel..." I'm sure there are people who do this, but they're ultimate nerds.

You could see whipping one of these Newtons out and writing "Hertz \$79," and then just stuffing the receipt in an envelope and never having to deal with it.

**DA:** I'd say people who need this are people who have a lot of information flowing in and out of their lives because they have a lot of communicating to do and things to keep track of. That's what it helps to do.

**SC:** The other thing she said, which is very important—since there's not 8086 assembly language instructions buried in our applications, applications you buy today will live for a long time. So things that you get used to today are only going to get better, and hopefully you'll see Newtons inside cameras. You'll see Newtons inside everything. You'll be able to use those applications everywhere it makes sense.

**Of the applications that currently exist that you've seen, what do you think are the most interesting?**

**SC:** My favorite's the expense manager thing, because I just waste so much

# COMPU DATA

**"A NAME TO TRUST"**



## LAPTOP SPECIALS

### TOSHIBA T4400SX

• 2 MB RAM  
• 120MB HD **\$1800**

### TOSHIBA T1850C

• 386SX/25MHz  
• 4MB RAM, 120MB HD  
• COLOR **\$1799**

### AST POWER EXEC

• 386SL/25MHz  
• 4MB RAM, 120MB HD **\$1599**

### NEC ULTRALITE

• 386SL/20MHz  
• 2MB RAM, 120MB HD **\$999**

### ZENITH Z-NOTE

• 386SL/25MHz  
• 4MB RAM, 80MB HD **\$1599**

### COMPAQ PORTABLE

• 486L/33MHz  
• 4MB RAM  
• 120MB HD **\$2750**

### COMPAQ LTE LITE 3/25

• 4MB RAM  
• 120MB HD **\$1700**

### COMPAQ LTE LITE 3/25

• 4MB RAM  
• 120MB HD  
• ACTIVE MATRIX **\$2700**



## SEPTEMBER CLEARANCE!!

**Best Prices In Town!**

### MODEMS

Hayes SmartModem 2400 ..... **\$99**  
Hayes Ultra 144 ..... **\$399**  
US Robotics Courier ..... **\$99**  
Practical Peripherals 9600SA  
Ext ..... **\$169**  
Intel Satisfaction 200 ..... **\$200**  
Megahertz 2400 baud for  
T1000/1200 ..... **\$49**  
Packard Bell 2400 baud  
(for Packard Bell) ..... **\$49**

### ACCESSORIES

XIRCOM Lan Card for laptop ... **\$200**  
Mountain FS 8000 Tape Backup ... **\$450**  
Mountain FS 7500 Tape Backup ... **\$899**  
HP LaserJet Fax ..... **\$475**  
Fifth Generation Printer Sharing  
4 Serial / 2 Parallel in/out ... **\$268.99**

### SOFTWARE

MS Productivity Pack for  
Windows 1.0 ..... **\$19.99**  
MS Mail 2.0 ..... **\$29.99**  
MS Excel for Windows 2.1 ..... **\$69.99**  
MS Word 5.5 ..... **\$49.99**  
MS Mail & Scheduler Plus  
for Windows 3.0 ..... **\$29.99**  
MS Word for Windows 1.1 ..... **\$49.99**  
MS Quick C 1.01 ..... **\$29.99**  
Turbo Pascal 5.0 ..... **\$49.00**  
SPC Office Writer 6.1 ..... **\$79.99**  
Tops Software ..... **\$39.99**

### AST

4MB Upgrade for Power Premium ... **\$175**  
2400 Fax Modem for AST Notebook ... **\$120**  
2MB Upgrade ..... **\$50**  
4MB Upgrade ..... **\$94**  
256K SIMMS Upgrade ..... **\$41**

### Pacific Data Font Cartridges

Headline in a Cartridge ..... **\$24.99**  
Plotter in a Cartridge ..... **\$19.99**  
Postscript Language for  
HP IIP/2D/3 ..... **\$84.99**



## NETWORK SPECIALISTS

NOVELL LANtastic<sup>™</sup>  
ARTISOFT INC.

**Best Service, Best Prices, Less Headache For You!**

# COMPU DATA

**"A NAME TO TRUST" OUR SEVENTH YEAR IN BUSINESS**

22 Third Street  
San Francisco, CA 94103  
**415/495-3422**

Mon thru Fri 9:30-6:30 ; Sat 11:00-5:00

Now More  
Conveniently Located to  
Serve You Better



Best Financing. 90 Days Same as Cash.  
Approval Within Minutes

Prices subject to change without notice. Limited to stock on hand.

Not responsible for typographical errors. IBM is a registered trademark of International Business Machines.





# Unlimited Optical Disk Storage!

## Rugged, Reliable and a Worldwide Standard!

Forget about headcrashes and media wear, like with SyQuest and Bernoulli, when you use Opto Advantage from ValueStor. The 3.5" 128MB rewritable optical disk, an ISO-ANSI standard, has been proven to surpass the most stringent reliability requirements of government and banking institutions worldwide. Backed by a **LIFETIME WARRANTY** - optical disk dependability is unsurpassed!

## Works Like A Hard Drive!

The high performance optical disk drive is **FAST** and works like a hard drive. It's compatible with virtually all DOS and Windows software. You can even double the disk capacity to 250MB using DOS 6.0.

## The MORE You Need, The MORE You SAVE!

At 30¢ per megabyte, there is just no cheaper way to add quality data storage. So when you need to add more storage, archive huge files, distribute software and databases, do backups or build your multimedia libraries, look no further. **OPTICAL DISK is the ideal solution!**

\*Lifetime Warranty applies to rewritable optical disk media only.



at **30¢/MB** and a **LIFETIME WARRANTY!**

## OPTO ADVANTAGE

|                                                                              |         |
|------------------------------------------------------------------------------|---------|
| 128MB Internal Drive.....                                                    | \$ 799. |
| 128MB External SCSI.....                                                     | \$ 899. |
| Portable 128MB.....                                                          | \$ 999. |
| <small>(Parallel Port Interface; works with desktop or portable PCs)</small> |         |
| Rewritable Optical Disk 5 Pak (640MB)....                                    | \$ 190. |

Call to order



**1-800-873-VALU**

time doing expense reports. Games are fun. What's also amazing is how fast people are writing serious applications. Much faster than with the Macintosh.

**DA:** It's hard to choose which app I like the most, but one I definitely like a lot is the [Fodor's] travel guide, because I get lost all the time. When we went to Boston, it actually was genuinely useful to have that travel guide. It does all the navigation and charts a path for you. "What is the address of the hotel I just checked into, now that I'm not there anymore and I can't remember how to get back there?" It's right there on the screen.

The fact that it's with you means that you don't have to go look stuff up, you don't have to keep asking people, you have it right there in your hands, and you just use it. That's one I like a lot.

## Do you see a huge migration of book publishers to this kind of medium?

**SC:** Yeah, I think there's going to be a lot of content. One of the concepts that's going to be interesting is the concept of Reference Plus. Think of the Birthday Present Advisor, where you're sitting there and saying, "I've got to get something for my father's birthday." It might ask you a few questions—"Does he like golf?" or something like that—and help you narrow down the decision, then just start randomly selecting things. That's a lot of content, but you have to have a little bit of intelligence, take advantage of the processor. There's the equivalent of a Mac IIx hiding in this box.

[Taking out PCMCIA card] This is the future.

**DA:** There are lots of different devices coming out in that PCMCIA form. This receives pages. It's

really cool and really convenient. With this kind of a thing, your pages will show up as text on a screen. Right now we're in beta on this—you can get the kinds of pages that people send you explicitly—"Mary's in the lobby, go down and get her"—but you can also just get the stuff that shows up every day. The newswires, the news service, the things that just come through once you've subscribed and said that's something that interests you. You just get that stuff on your Newton. It just shows up.

## How much of a problem is the equivalent of disk-swapping with the PCMCIA cards when you change applications? Do you have to change cards all the time?

**SC:** Well, the typical way to use it is you might have a peripheral and a memory card. This pager actually has a little memory in it, so the pages that come in when it's not plugged in get saved here.

But as we all know from any computer, it has too few slots and too few disk drives. It's like everything else. And of course we all want it to be infinitely thin and infinitely light and infinitely cheap. There's going to be some people that have ten of these gadgets, and they're going to curse the day we didn't make a ten-slot Newton. But we're designing it for affordability and portability right now.

Some application-mongers will keep one memory card in the slot and put all their applications on it, because all the apps have a tendency to run very small. This is a 2MB card; it would be a long time before I filled that. People who are much more on the go would probably keep a pager card there. But swapping's fine, you just pop it out and pop it in.

## Do you expect a lot of third-party people to make Newtonoid devices?

**DA:** Definitely. We're licensing the technology.

**SC:** That's what's even more exciting. I was kind of glib about Newton in a camera, but there are going to be some really cool Newtons out there that we have never even thought of.

But also, just take a look at how many devices you buy today that have an LCD screen on them and a computer in them. And you say, "Why am I paying for all this proliferation of computers?"

Probably the most obvious right now is GPS devices, these things that tell you where you are in the world. I just saw a Sony device that looks almost identical to this, has a million buttons on it, has the same size screen. If you talk to an engineer, the guts of the GPS part are actually very cheap relative to what you pay for this whole device—the device is two or three times more expensive than the Newton—because the quantity's not there.

So give me the GPS guts, put it in here on a card, and now I have a beautiful user interface, the ability for expandability by putting apps in on here. I have everything I want, but I can use it in many places. I can now use that also for keeping my addresses. You could imagine a world where every device has an address book in it, a notepad in it; or you could just, say, put peripherals onto the one smart device that you want to carry around with you—cellular phone, GPS, all that stuff. You might want a scanner...

People are going to do cool things. ■





# Quality You Can Count On!!!

# BOLD

DATA TECHNOLOGY, INC.  
Computer Systems  
Components  
Peripherals



## BDT-386DX-33Mhz

- BDT Basic Package
- BDT 386DX-33 MotherBoard
- Intel 386DX-33 CPU on Board
- AMI Bios
- Baby AT DeskTop or Mini Tower Case With 230W Power Supply

**\$999**

## BDT-486SX-25Mhz

- BDT Basic Package
- BDT 486SX-25 MotherBoard
- Intel 486SX-25 CPU on Board
- AMI Bios
- Baby AT DeskTop or Mini Tower Case With 230W Power Supply

**\$1029**

## BDT-486DX-33Mhz

- BDT Basic Package
- BDT 486DX-33 MotherBoard
- Intel 486DX-33 CPU on Board
- 64K Write Back Cache
- AMI Bios
- Mini or Medium Tower Case With 230W Power Supply

**\$1339**

## BDT-486DX-50Mhz

- BDT Basic Package
- BDT 486DX-50 MotherBoard
- Intel CPU on Board
- 256K Write Back Cache
- AMI Bios
- Tower Case With 250W Power Supply

**\$1459**

### All Basic Systems Include:

- 4MB of 70ns RAM
- 1.2 and 1.44 Floppy Disk Drive
- 80MB IDE Hard Disk Drive
- 2 FDD and 2 HDD 1:1 IDE Controller
- 2 Serial, 1 Parallel and 1 Game Port
- VGA Card with 512K on Board
- 14" VGA Monitor
- 101 Key Enhanced Keyboard

### Upgrade Options:

- 14" Super VGA Monitor with 1MB SVGA Card +\$90
- 14" Super VGA Monitor with Window Accelerator Card +\$175
- 120MB IDE Hard Disk Drive +\$60
- 200MB IDE Hard Disk Drive +\$240

## BOLD DATA TECHNOLOGY

The Intel Logo is a Registered Trademark of Intel Corporation

920 Auburn Ct.  
Fremont, CA 94538

Tel: (510) 490-8296  
Fax: (510) 490-9428

Prices Subject to Change Without Notice. Not Responsible for Typographical Errors.



# BMUG's Choice for Macintosh Specialty Store

# MAC<sup>SM</sup>

Modern Accessories for Computers  
Since 1985

800-BUY-A-MAC  
(510) 644-0500  
(510) 549-8785  
(510) 644-0584  
2156A University Avenue, Berkeley, CA 94704  
Rental, Lease or Purchase of Macintosh

Order Line for US & CA (Toll Free!)  
General Number / Sales Department  
Macintosh Repairs  
Order by Fax

**Store Hours**  
10:00 a.m. -- 6:00 p.m.  
MON -- SAT

ATM



TOP 10 Store in the Bay Area ... San Francisco Examiner

## Modem

|                                    |       |
|------------------------------------|-------|
| PowerPort Gold for PowerBook       | \$399 |
| PB DataLink w/ Voice FaxModem      | \$439 |
| Supra 2400 Baud Modem W/ Cable     | \$99  |
| Supra 24/96 FaxModem W/ Microphone | \$199 |
| Supra FaxModem v.32bis 14,400      | \$309 |
| Teleport Gold v.32bis 14,400       | \$399 |
| US Robotics Mac&Fax 14,400         | \$249 |

## Printer

|                                                 |              |
|-------------------------------------------------|--------------|
| <b>NEC SilentWriter Model 95</b>                | <b>\$995</b> |
| •True 300 dpi Adobe PostScript II Printer       |              |
| •8000-Page Toner & Cable Included               |              |
| Canon 10ex/Power Print Bundle                   | \$439        |
| •360 dpi, Canon Bubble Jet Printer              |              |
| •Compact, Portable--Perfect Powerbook Companion |              |
| StyleWriter II, w/ Cable, <i>In Stock</i>       | \$339        |

## Memory Upgrade

|                                  |          |
|----------------------------------|----------|
| 1 Meg Simms, 100/120ns           | In Stock |
| 1 Meg Simms, 80ns                | In Stock |
| 2 Meg Simms, 80ns                | In Stock |
| 4 Meg Simms, 80ns                | In Stock |
| 4 Meg Simms, Centris, Quadra 800 | In Stock |
| 6 Meg Board, PowerBook           | In Stock |
| 4 to 14 Meg Board, PB Duo        | In Stock |
| 4 to 10 Meg Board, PB 180        | In Stock |
| 4 to 10 Meg Board, PB 165c/180c  | In Stock |

## PLI Infinity Drives

2 Year Warranty

|                                         |          |
|-----------------------------------------|----------|
| PII Infinity 44 SyQuest, w/1 Cartridge  | \$369    |
| PII Infinity 88 SyQuest, w/1 Cartridge  | \$569    |
| PII Infinity 88 SyQuest, w/2 Cartridges | \$659    |
| SyQuest 44MB / 88MB Cart.               | \$69/109 |

## Free Scanner

|                                                             |        |
|-------------------------------------------------------------|--------|
| UMAX ScanOffice G/S Scanner                                 | \$895  |
| •Ofoto, TypeReader, Publish It! Easy Included, \$1000 Value |        |
| •Award-winning total office scanning solution               |        |
| UMAX 630LE 600 dpi Color Scanner                            | \$895  |
| UMAX 630 600 dpi Color Scanner                              | \$1095 |
| •24 Bit Photo-Realistic Color / 256 Gray-Scale              |        |
| •Best Rated Scanner by MacUser Magazine                     |        |
| •Photoshop Version 2.5 Included                             |        |
| UMAX 840 800dpi Color Scanner                               | \$1349 |
| UMAX 1200SE 1200dpi Color Scanner                           | \$3195 |
| •10 bit per pixel, 30 bit, 1 billion colors                 |        |
| •Excellent for professional prepress & image editing        |        |
| •Slides, transparencies and X-ray images supported          |        |

## Radius

|                                                   |       |
|---------------------------------------------------|-------|
| Radius Precision Color Pivot                      | \$999 |
| •Works on Centris 610, 650, Quadra 800 & 950      |       |
| Radius Pivot                                      | \$639 |
| •Crisp, Clear Full Page Viewing                   |       |
| •Portrait and Landscape Views                     |       |
| Radius Precision Color 24XP Pro                   | \$509 |
| •24 Bit Accelerated Card for 16" and 14" Monitors |       |
| Radius TPD/19 Monitor                             | \$729 |
| •Works with Centris & Quadra Built-In Video Port  |       |

## CLEARANCE

|                                                 |              |
|-------------------------------------------------|--------------|
| Abaton Color Flat-Bed Scanner, <i>New</i>       | \$595        |
| GCC WriteMove Portable Printer, <i>Used</i>     | \$199        |
| Laserwriter IINT / NTX, <i>Used</i>             | \$895/995    |
| Plus 2.5 MB W/ Keyboard, <i>Used</i>            | \$299        |
| SE/30 2 MB / 40HD W/ Keyboard, <i>Used</i>      | \$895        |
| Radius TPD/19 / Pivot, <i>Demo</i>              | \$595/ \$495 |
| Sigma Multimode 19" W/ Card, <i>Demo</i>        | \$795        |
| SuperMac Platinum 21" B/W, <i>Open Box, New</i> | \$895        |
| SuperMac 20" Trinitron Dual Mode, <i>Used</i>   | \$1999       |
| Video Spigot, IIsi, Premiere, <i>New</i>        | \$279        |

**Back to School Special**  
**Buy any Macintosh**  
**Receive Mac Write Pro for \$69**

(Value at \$249)



\* Macintosh  
Rebate  
Up to \$350

## PowerBook Upgrade

|                                        |       |
|----------------------------------------|-------|
| 80 MB HD*                              | \$295 |
| 120 MB HD*                             | \$379 |
| 213 MB HD*                             | \$679 |
| Full Cycle Charger                     | \$139 |
| PowerPort Gold                         | \$399 |
| DateLink Voice                         |       |
| FaxModem                               | \$439 |
| *Upgrade/Swap Price Labor Charge Extra |       |

## PowerBook Duo 230

|                                       |         |
|---------------------------------------|---------|
| 4MB/80HD                              | \$1549  |
| Mac Color Classic 4MB/80HD            | \$1119* |
| Mac IIfx 5MB/80HD, <i>In Stock</i>    | \$1449* |
| Centris 610 4MB/80HD, <i>In Stock</i> | \$Call  |
| Centris 650 8MB/80HD                  | \$Call  |
| Centris 650 8MB/230HD                 | \$Call  |
| Centris 660AV 8MB/230HD               | \$2239  |
| Quadra 800 8MB/230HD                  | \$3199  |
| Quadra 840AV 8MB/230HD/CD             | \$3759  |
| PB 145B 4MB/40HD, <i>In Stock</i>     | \$1329  |
| PB 165C 4MB/80HD                      | \$1799  |
| PowerBook 180 4MB/ 80HD               | \$2499  |
| PowerBook Duo 210, 4MB/80HD           | \$1299* |
| PowerBook Duo Dock, <i>In Stock</i>   | \$849*  |
| Apple CD 300, New Low Price           | \$409   |
| NEC MacSync                           | \$459   |

## Mac Trade-In

**SAVE on SALES TAX**

- We Buy or Trade Any Macintosh CPU (Mac SE minimum) & Peripherals
- Save on Sales Tax - Pay Tax on the Difference to the Trade in

Prices Good  
w/ Ad Only

## HD Price Reduction

|                      |        |                                    |         |
|----------------------|--------|------------------------------------|---------|
| Quantum ELS 42MB HD  | \$209† | Apple 40MB HD, <i>New</i>          | \$195   |
| Quantum ELS 85MB HD  | \$239† | Apple 160MB HD, <i>Great Price</i> | \$199   |
| Quantum ELS 170MB HD | \$299† | Fujitsu 520MB HD                   | \$795†  |
| Quantum LPS 240MB HD | \$369† | Fujitsu 1.2 Gig HD                 | \$1295† |

†External Unit  
Add \$90 ea.

## Macintosh Rentals

Security Deposit  
Required

Mac SE  
2MB/40HD  
**\$69**  
Monthly

Mac SE/30  
2MB/40HD  
**\$89**  
Monthly

Mac Plus  
2MB/20HD  
**\$59**  
Monthly

PowerBook 145B  
4MB/40HD  
**\$199**  
Monthly

## Macintosh Lease To Own

Other Models and  
Options Available  
Call for Rates

|                                                |          |
|------------------------------------------------|----------|
| Mac Centris 650 8MB/230HD, <i>New Low Rate</i> | \$79/Mo  |
| Mac Quadra 800 8MB/230HD, <i>New Low Rate</i>  | \$113/Mo |
| Mac Quadra 950 8MB, <i>New Low Rate</i>        | \$120/Mo |
| Apple 14" Color Display                        | \$19/Mo  |
| Apple 16" Color Display                        | \$44/Mo  |
| NEC Silentwriter 95, <i>New Low Rate</i>       | \$35/Mo  |
| LaserWriter Pro 600, 8MB RAM                   | \$67/Mo  |
| LaserWriter Pro 630, 8MB RAM                   | \$88/Mo  |
| SuperMac 20" Multimode XL Trinitron            | \$92/Mo  |
| SuperMac 21" Platinum Monitor                  | \$39/Mo  |
| Thunder 24 Video Board--Fastest 24 Bit         | \$85/Mo  |

Lease payment based on 36Mo/\$1 Program, Business Lease Only

Prices Advertised Are for MicroTimes Readers Only. Please Mention This Ad When You Call or Visit Us.

This Ad Expires Oct. 18, 1993



# Live From Boston

## The BMUG Report From Macworld Expo

BY DAVID  
MORGENSTERN

**T**he future. What does it hold? Will we be watching the Giants in the playoffs (apologies to Southern California readers), or *Beavis and Butthead* repeats? Who can tell? If only the World Series race was as predictable as the weekly Thursday night BMUG meeting.

This meeting is the crossroads of the Macintosh world. Every week, newbies, longtime users, and some of the most knowledgeable gurus, developers, writers, consultants, and rumor-mongers get together to share the latest tips, information, and bug reports. This Mac Mystery Spot was at the top of the list when Prime Time Live, the ABC television news magazine, looked for a real glimpse into Macintosh culture. They had the cameras running to pick up the meeting audio and visuals—the BMUG crowd in action. Lights. Cameras. BMUG!

### BOSTON NEWTONWORLD EXPOSITION

There were only two words on the mouths of BMUG pilgrims attending the August Macworld Expo in Boston: "Newton" and "AppleScript." Apple's public relations effort got way out in front of the developmental effort, and we've heard nothing but Newton for the past year. So when the palmtops were actually being sold, there was a hysterical reaction from pent-up, desperate, unreleased Newton-energy.

Three retailers sold the MessagePad on the show floor. Every morning, Apple carted over their daily allotment of a thousand each. The doors would open and a voracious crowd would race to form lines that stretched the length of six booths. An hour later, the feeding frenzy would abate—until the next day. One vendor had a couple of Apple's demonstration kiosks, which let people experiment with the MessagePad. Unfortunately, they had to remove the devices from the kiosks because "too many people wanted to buy them." Perhaps they were worried about a riot? Hopeful Newton wannabes would pathetically flip through the sales literature, settling for yet another dose of print hype.

The arrival of the palmtops caught

vendor cash registers with their drawers down. The CompUSA receipts listed the MessagePad as an "LC III," which should not be seen as a reflection on the performance of the economy-flavored Mac. Another had them down as "calculators," nowhere near the mark. I would hate to be the user trying to explain to the IRS auditor a thousand-dollar calculator picked up at a Macintosh show.

The other monster hit of the Expo was BMUG's new book, *The Tao of AppleScript: BMUG's Guide to Macintosh Scripting* by Derrick Schneider. For years, MS-DOSers have thumbed their noses at Mac users, pointing to their batch files and complex macro capabilities. Some Macintosh commercial and shareware programs have had some of these abilities, with the most familiar being QuickKeys by CE Software. Add/Strip, a shareware text file processing utility, is able to alter all of the files placed in a folder, one after the other. But there was no system-level method for programmers or users.

About four years ago, Apple began the development of a standard scripting architecture. You know they're serious when they start using the A-word.

The first thing they did was to decide how applications would talk to each other. This foundation is called Apple Events, the System 7 language of Interapplication Communications (IAC). AppleScript is the scripting language for the rest of us, that connects us to the hidden layer of events.

Depending upon the "awareness" and "recordability" of the applications you own, you can get them to jump through hoops, or add features to a program that doesn't have everything you need for a job. Although AppleScript can record simple macros to automate tasks in a single program, it can also be programmed to connect many different applications at once. A script was used to help the production of the *BMUG Disk Catalog*, published by Addison-Wesley. It took information on the thousands of programs in the BMUG shareware library, stored in almost two dozen FileMaker Pro databases, and passed it on to PageMaker for

formatting and correct positioning. The script chugged on for ten days, but saved months of human work. Sound like something you could use? You bet!

*The Tao of AppleScript* is the first book on the market about AppleScript. It includes a high-density disk containing Apple's official AppleScript software, as well as scripting utilities and additions written specifically for the book. To run the software you need some form of System 7 and at least 4MB of RAM. The book, just shy of three hundred pages, is published by Hayden Books. *The Tao of AppleScript* has a list price of \$24.95, but is available mail-order through the BMUG office for \$20 (plus \$4 shipping and handling). This is one hot book, and we completely sold out all the copies we brought to the Expo. We have plenty, so check it out!

### MORE EXPOSURES

I asked some of the BMUG jet-set to give their picks of the Boston Macworld Expo. Here are their comments:

• **Scott Beamer, BMUG's business software guru**

"It's been years since I felt as live and technically rich an Expo. There was real excitement in the air. And it wasn't just the Newton.

"I've been working on a book that covers a dozen common Mac applications, and discovered to my dismay that all of them have new versions in development. I'm having to redo all my screenshots! After I got over the shock that *all of them* are in beta, I started to look for the reason. Obviously, everyone is gearing up for PowerPC.

"The best gadget of the show was in the SVA Software booth. It was their first time at a Macworld and it showed—but they were fun. They had FaxScanner, a little black box that lets you hook up a standard fax machine to your Mac by way of a high-speed modem [the 14.4Kbaud, V.32bis variety]. You also can run a document through your fax machine, and it moves into your Mac like a scanner. SVA is bundling the ExperVision TypeReader OCR (optical character recognition) software



Copyright 1993 © by David Morgenstern. All rights reserved worldwide.



## Kick off the Fall Season with an exciting project from HSC!

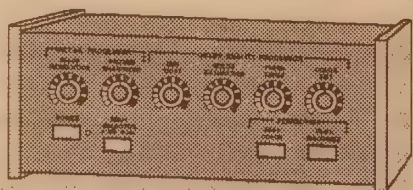
Summer's heat may not be fading just yet, but it's time to be thinking of back-to-school and back-to-work. Those indoor diversions and projects will benefit from the bargains at HSC!

### Video Processor on a Budget!

Now you can enhance your video productions without cleaning out your wallet! The Sunburst High Definition Video Processor gives you control over the quality of your video tape images to correct problems encountered during taping. Four color controls allow you to adjust "sunlight" (brightness), color saturation (really gives life back to washed-out videos), flesh tones and color tint (useful for videos taped with a camera that did not have color balance set). Two other controls let you adjust image resolution and picture sharpness, while a pair of controls let you suspend the processing so you can see the effect of what you are adjusting. Switchable between two different inputs (video only, not RF). Inputs and outputs are RCA jacks. New in box with manual, 90 day warranty. Won't last at this price!

HSC# 13978

\$49.95

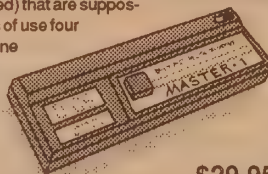


### Chernobyl Fallout?

What else could it be when the Russians gear up to build many thousands of these personal radiation dosimeters? They were obviously meant for mass-consumption, as they are blister-packed on a hanger card! It is also telling that some of the packs have instructions in Finnish and Swedish! These pocket-sized (5" x 1.75" x .75") units are frankly not as high in build quality as the Soviet microscopes we were selling a year ago, but they do seem to count gamma radiation exposure from .01 to 9.99 micro-Sieverts per hour (One micro-Sievert = 100 micro-Roentgens). According to the instructions, the maximum admissible safe radiation level is .1 to .6  $\mu$ Sv/h. The instrument uses four commonly available button cells (Russian ones included) that are supposedly good for about 2 years of use four times a day. We opened one of the units up and were interested to find Russian IC's inside...Hmm, do they have a Silicon Valley in Russia?

HSC# 80123

\$29.95



### Windows & DOS Deal!

The real stuff! Genuine Microsoft Windows 3.1 and DOS 5.0...now you can afford to upgrade from earlier versions, or put them on that second computer you've just built. New, in-the-box OEM versions of these popular operating systems say Texas Instruments on the manuals and disks, but will work on any IBM or compatible computer. Comes with full manual and 3.5" diskettes. Won't last! HSC# 14435 Microsoft DOS 5.0 \$34.95 HSC# 14434 Microsoft Windows 3.1 \$69.00

### One-trick Phone Friend

This little novelty was meant as an easy-access dialer for one of the off-brand long distance services. You can't change the pre-programmed access codes, but it will remember the last number you dialed with it, so you could use it as a one-number (16-digits) memory re-dialer. Handy for those midnight overseas calls! Uses three button cells which might need replacing. HSC# 14438 \$4.95

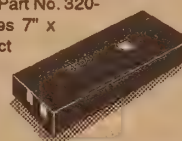


### Last of the MFM Controllers!

No one is making MFM controllers anymore, so if you have a MFM drive or two and don't have a controller, you definitely need one of these 16-bit (AT bus) cards. Everex EV-349 supports two floppies and 1:1 interleave for up to two MFM hard drives. Latest surface-mount technology means rugged reliability and low power consumption. Brand new in antistatic bag, cables not included. Sorry, no docs yet. There are plenty of MFM Drives out there on the secondary market, but controllers are another matter...hurry! HSC#14043 One year warranty! \$39.95

### Battery Monolith

These new-in-box rechargeable Ni-Cd battery packs appear to be used in Zeos lap-top computers. Zeos Part No. 320-0008-00, 12 VDC 1700mAh, measures 7" x 2.75" x .75" and has .375" square contact pads. Use it to power your 12VDC projects, or turn it over and film your own version of "2001: A Space Odyssey"! HSC# 14454 \$12.50



Don't Forget!

Don't Miss It!

HSC's

All three locations!

If you're in the area, be sure to come by for the year's best sale!

## Giant 30th Anniversary Sale!

Warehouse Clearance... Many one-of-a-kind Specials and Closeouts!

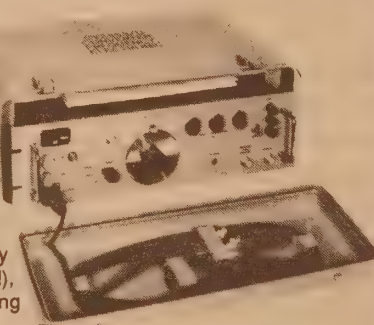
Saturday only! Sept. 18, 1993 9AM to 5PM

This is the big, once-a-year blowout...Nearly everything is on sale!...Up to 90% off! Discounts on everything...Prizes, Drawings, Refreshments...Deals, Deals Deals!

### Neat Box you can have three ways!

This is the type of deal we love to offer our customers, because it has so much potential. We bought these items for the neat case, but then discovered that the unit inside has a wealth of possibilities. We offer some suggestions, let your imaginations run wild!

Option #1 -- Weathertight Equipment Case will accept a 19" standard rack-mount unit up to 5" high (with standard 5.25" front panel) and 11" deep. Gasketed front cover has cable storage clips, case has storage slot for .5" thick manual above unit. Outside dimensions are 20" x 7" x 15" deep, exclusive of rubber feet, four sturdy latches and spring-loaded carry handle. Weight 11 lbs. Constructed of aluminum, Navy grey color. Perfect for ham gear (field day!), instrumentation, or other projects requiring rugged, weathertight Mil-spec. case.



HSC# 14032

\$29.95

Option #2 -- Frequency Converter Unit (removed from case above) Mod. CV-2353/U was used to mix external signals from 100 Hz to 2 MHz with an external oscillator signal for output to a spectrum analyzer. It also has a 3 MHz signal source that may be applied to the spectrum analyzer. We weren't too excited about this unit until we noted the high quality of construction of several nifty RF modules inside. It uses 115 VAC, has a balanced mixer, a ultra-stable VFO (2.985 - 3 MHz) with a beautifully clean sine-wave output, 600 $\Omega$  step attenuator, stable -15 VDC power supply, and a 2.5 MHz IF amplifier module. We tested one, and after warmup the VFO drifted only 25 Hz! You could add a crystal oscillator and use the balanced mixer for a QRP Transmitter, or add a detector and modify the VFO for the desired band and have a HF receiver, use as a stable signal generator for HF, or you could add frequency multiplier stages for a stable VHF RF source, etc. Includes power cable, three BNC cables, manual w/ schematic. Unused!

HSC# 14033

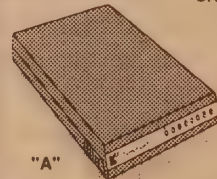
\$19.95

Option #3 -- Buy both units above, only \$44.95! What a deal!

### Real Modems at Unreal Prices!

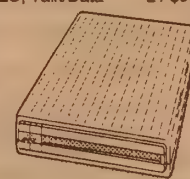
This will certainly excite people that know modems...genuine Telebit modems with their reputation for high speed and quality! We recently received a nice selection of used, factory-tested Trailblazer and Trailblazer Plus modems. In addition to being compatible with regular PC modems (including Hayes), these units feature a proprietary protocol (PEP mode) that lets them communicate with each other (and other PEP modems) at super-high speed...19,200bps! Over normal voice lines! And it's all automatic! The 68000-based circuitry interrogates the recipient and selects the highest transmission speed for line conditions and receiving modem capability. In PEP mode, data rate "fall back" in case of line-noise or errors is in increments smaller than 100bps, instead of the 50% degradation from, say, 9600 to 4800bps that a typical modem will try. These units are popular with UNIX users, high-volume data-net and on-line service users, and business installations. Units in old-style cases (left below) measure 8.5" x 12.5" x 2", new-style cases (below right) are just slightly bigger. All have RS-232 serial interface and come with new power supplies.

| HSC#  | Model #                 | Compatibility                                                                                                                                              | Style | Price                  |
|-------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------|
| 14428 | Trailblazer             | PEP: up to 18,000 or 19,200bps w/ data compression, V.22bis (2400bps or 4800 w/ MNP-5), V.22 (1200bps), UNIX UUCP, Kermit, XModem, YModem, SDLC            | A     | \$39.95 or 2 / \$70.00 |
| 14431 | Trailblazer Plus (late) | PEP: up to 18,000 or 19,200bps w/ data compression, V.22bis (2400bps or 4800 w/ MNP-5), V.22 (1200bps), UNIX UUCP, Kermit, XModem, YModem, SDLC, Talk/Data | B     | \$49.95 or 2 / \$90.00 |



"A"

Copies of Trailblazer Plus or T-2500 manual (which is all we have, but should help with any of above models) are available for \$10.00 (lots of pages to copy!)



"B"

### More Modem Madness...

In addition to the great deal on used Telebit Modems (see above), we offer these new-in-the-box Hyundai modems at rock-bottom prices. They may be super fast, but you won't be paying the high-speed surcharge that many on-line services are now charging. It is also an inexpensive way to "get your feet wet" in the world of PC communications. Manuals, software and telco cables included.

|            |                        |         |
|------------|------------------------|---------|
| HSC# 14447 | 2400bps External Modem | \$24.95 |
| HSC# 14448 | 1200bps External Modem | \$12.95 |
| HSC# 14449 | 1200bps Internal Modem | \$9.95  |

Terms: Some quantities limited; all items subject to prior sale. Minimum order: \$10.00 plus shipping. Orders under \$20.00 subject to \$2.00 handling fee, in addition to shipping. All orders shipped FOB Santa Clara, CA (this means you pay freight!) by UPS Surface (no P.O. Boxes) unless otherwise specified, in which case prevailing carrier rate plus \$5.00 handling fee applies. Prepaid orders that don't include shipping charges will be shipped freight COD. There is a \$4.00 UPS charge added to shipping charges for COD shipments. If you have questions about your order, please call Customer Service at (408) 732-1854 M-F 9AM to 5PM PST.

**HALTED**  
specialties co.

**HSC Electronic Supply**

Toll Free (Orders Only) 1-800-4 HALTED (1-800-442-5833)

Retail Stores:

3500 Ryder St., Santa Clara, CA 95051

(408) 732-1573

4837 Amber Ln., Sacramento, CA 95841

(916) 338-2545

6819 Redwood Dr., Cotati, CA 94931

(707) 792-2277





with the hardware. This was the big OCR hit from last year's Expo. So if you already have the modem and a fax machine, think about this before buying a scanner. The FaxScanner and software list for \$349." (SVA Software is at 1-800-457-4433, or fax 305/446-9928.)

• **Tim Holmes, BMUG staffer and shortstop** [Tim was one of the BMUGers who bought the Newton MessagePad at the Expo. I asked him for some early thoughts.]

"How cool is the Newton? Pretty cool. There hasn't been a single person that I've shown it to that hasn't thought it was a cool device. And to beat that statement, I've shown it to at least three or four women who also thought it was cool. That is amazing. That beats the Mac hands down.

"My ex-wife, a naturalist, my brother, and I had a long discussion on how this technology will change the way people deal with information. This wasn't a discussion that we Mac nerds started, but the female naturalist. She theorized that Newton may bring a schism between techies and non-techies. This little item is more than revolutionary. Even if you're not so awed by its ultimate gadgetry, it actually seems to bring about humanistic and futurist concerns in its users."

• **Stephen Howard, chair of the BMUG board of directors**

"The real multimedia. Showing at Macworld for the first time was Soft Parake for Macintosh from TUNE 1000. The company claims to be the 'fledgling subsidiary of a reknown [sic] accounting software firm, Fortune 1000.' The song packs are all MIDI, which give you tempo and pitch controls, and lets you mute or change specific instruments. When it's released in September the software will cost \$49.95, with songpacks running \$20.

"As an added bonus, you get a mushy-headed philosophy! Here's the special message inside the press kit: 'So there you have it... Digital this, digital that... As children we used to play outdoors, breathing in life, enjoying the simplest

things... Now, we live in a rapidly changing environment, one that is, at times, hard to keep up with... By adapting our lives to the new technology, we are creating our futures, our philosophies... This world can come together... Right Now... TUNE 1000: The Universal Network of Entertainment... Mission: to bring the world closer through a network of entertainment.' If you're interested, take a teaspoon of lemon juice first, and then call TUNE 1000 at 1-800-363-8863.

• **Steve Semple, BMUG Boston member**

"Since I had already grown tired of Newton, and didn't feel like standing in long lines to play with one, I was impressed with the presentations put on by Kai Krause and HSC Software, the publisher of Live Picture.

"This is the imaging application that seems to blow the doors off PhotoShop. Kai was very accessible, as were many of the chief programmers. He did several presentations at both Expo venues, and hosted a late-nite party at the Hard Rock Cafe. The Live Picture booth was packed throughout the show, and everyone was blown away by its performance."

Live Picture is the first application to use the exciting FITS technology developed by Bruno Delean, an idiosyncratic French programmer. He reportedly retreats to his grandmother's house in the Pyrenees mountains, and writes out all his code longhand. FITS has a better and faster way of handling graphics images. Instead of making the thousand and one changes we impose on monster-sized graphics files, FITS creates a smaller lower-resolution file for us to play with. This working file is linked to the original file, which saves the time usual graphics programs spend updating the original image. The big graphic companies are all talking to Bruno, begging for licenses. FITS technology will eventually be folded into all our graphics programs.

## TIP CITY

• **Mitch Turitz, a librarian at San Francisco State, pointed me to a good MacWrite II and Pro tip.**

If you have to deal with lots of little text files from mainframes or PCs, you're used to seeing lots of extra returns in your

## CALL US FIRST! BEST PRICES AROUND

### HARD DISK DRIVES

• Western Digital • Maxtor •  
Conner 170, 200, 250, 340 & 425 MB

• EPROMS • CPU's • I.C.'s  
• MEMORY • CRYSTAL  
OSCILLATORS

### CALL FOR LATEST PRICING!

#### \*THIS MONTH'S SPECIALS\*

#### NEW! WESTERN DIGITAL HARD DRIVES

170 MB 200 MB 340MB

**\$175 \$219 \$290**

|                                     |        |
|-------------------------------------|--------|
| 80387 DX/SX INTEL MATH CO-PROCESSOR | CALL   |
| 287-10 ITT MATH CO-PROCESSOR        | \$28   |
| 27C64 EPROM                         | \$2.25 |
| 27C256 EPROM                        | \$2.75 |
| 27C512 EPROM                        | \$3.80 |

## MICROLINK

OEM AND BULK PRICING AVAILABLE

(408) 263-7501 • FAX: (408) 263-7679  
743 AMES AVE., MILPITAS, CA 95035

## We Beat Hi-Tech & Competitors' Prices!!

Upgrade your 386DX to 486 Performance without buying a new motherboard!

Get a TI/Cyrix 486DLC CPU Now!!

|                                                        |           |
|--------------------------------------------------------|-----------|
| TI/Cyrix 486DLC-33/40 CPU (Supports 386DX CPU Socket)  | \$74/98   |
| Intel/AMD 586, 486DX, SX, 386, 286 CPU's (any speed)   | \$84/114  |
| Orchid VL-Bus Superboard w/256K Cache (Made in USA)    | \$149     |
| IBM 486SLC2-33/66 VL-Bus Motherboard w/CPU & math chip | \$353/393 |
| 386/486 Universal VL-BUS Motherboard w/256K Cache      | \$118     |
| Math Chip: 387DX-40/33                                 | \$53/49   |
| 387SX                                                  | \$38      |
| 287                                                    | \$26      |
| NEW ESDI 1:1 Cache Controller (Cirrus Logic Chipset)   | \$108     |
| NEW RLL 1:1 Controller (DTC 7287)                      | \$35      |
| Orchid Fahrenheit 1280 Plus VLB                        | \$140     |
| Orchid VLB IDE+IO                                      | \$59      |
| Actix Graphic Engine 32VL Plus w/2MB                   | \$215     |
| 130MB (Maxtor) IDE                                     | \$134     |
| 210MB IDE                                              | \$198     |
| 250MB HD                                               | \$216     |
| 340MB                                                  | \$277     |
| SVGA (.39) (.28) (NI) ... \$196/236/256                |           |
| Trident SVGA 1MB Card                                  | \$42      |
| Mitsumi CD ROM                                         | \$175     |
| Super full tower case                                  | \$68      |
| VL-Bus IDE IO                                          | \$39      |
| VL-Bus VGA (1MB)                                       | \$89      |
| 14400/14400 Fax/Modem                                  | \$133     |
| SIMM 60/70/80ns                                        | From \$35 |
| Mouse w/software                                       | \$8.00    |
| Modem w/software                                       | \$9.00    |

MANY MANY UNLISTED ITEMS WITH BEST PRICES!—CALL

Overstock Clearance Sale! Hurry Up!

|                                      |                                        |
|--------------------------------------|----------------------------------------|
| XT/286/386 Motherboard ... From \$15 | Memory Card, Controller ... From \$5   |
| Hard Drives ... From \$20            | XT/286/386 Complete Sys. ... From \$99 |
| Monitors (Mono, VGA) ... From \$15   | Printers ... From \$35                 |

NEW!!! WYSE 386SX-20, 1MB, 1.2MB Floppy, IDE Card, \$209  
WYSE Keyboard, Deluxe Desktop Case, Nice Looking

| MB+CPU            | Basic System | Complete System |
|-------------------|--------------|-----------------|
| 386SX-33          | \$174        | \$244           |
| 386DX-40/64K      | \$114        | \$284           |
| 486DLC-33/64K     | \$134        | \$304           |
| 486SX/64K VLB     | \$184        | \$354           |
| 486DX-25/64K VLB  | \$255        | \$428           |
| 486DX-33/64K VLB  | \$368        | \$538           |
| 486DX2-66/64K VLB | \$557        | \$727           |

\*486DLC System w/math chip installed  
\*486DLC-40 available Add \$40  
Complete System Includes: Motherboard, CPU, 4MB RAM, 1.2MB & 1.44MB  
FDD Controller, 130MB Hard Disk, 101 Keyboard, SVGA Monitor w/SVGA  
Card, Power Supply.

### Palo Alto Micro Corp.

3483 El Camino Real, Palo Alto, CA 94306

415/493-8209

Fax 415/493-4572

M-F 9am-6pm & 8pm-10pm

7 Years in Business  
with Quality Parts  
& Service

Prices and Availability Subject to  
Change w/o Notice



documents. This is because those systems add line feeds to the end of each line as the document is composed or sent to the host computer. Although many users are used to seeing the Text with Line Breaks option in the Save As pop-up menu, it also exists in the Open dialog!

Go to the Open command under the File menu. Select it and click on the Show pop-up menu, which defaults to All available. Move down the list until you find the Text with Line Breaks option. Now open a text file. All the line feeds are gone, leaving "true"

**One vendor had a couple of Apple's demonstration kiosks, which let people experiment with the MessagePad. Unfortunately, they had to remove the devices from the kiosks because "too many people wanted to buy them."**

paragraphs that were formatted with two returns in a row. If someone has gone to a lot of trouble to format their text with spaces and returns, then this procedure will make a real mess. But you can always open a text file twice: once with the Text with Line Breaks option, and again with the plain Text option, which will retain the line feeds.

• If you've purchased a Newton MessagePad—lucky you! You might be interested in the

BMUG Newton disk. There are a number of Newton information files to help you use the product better, and alert you to

problems that others may have solved. There's also a helping of Newton freeware and shareware.

There are a number of utilities on the disk. The most useful is SciCalc, an implementation of a barebones scientific calculator. There's also a program to help get rid of garbage hanging around in your Newton's memory, which might be causing you to restart more often than necessary. But the MessagePad is also supposed to be fun, so there are plenty of games!

There's a Poker game and MasterMind, a number guessing game. For the burned out executive, there's Mr. Advisor, by Ben Sharpe, a San Francisco programmer. This program is a Personal Digital Advisor. You ask questions, any question on any subject, and the software will give you advice. It's the MessagePad version of the black plastic magic eight-ball fortune tellers you can find in the gag section of tourist trap gift stores.

The Newton disk is available from the BMUG office for \$4 (plus postage and handling). ■

## BUSINESS SOLUTIONS

### ALL THREE TYPES

#### OF VISUAL

#### TELECONFERENCING—

#### DESKTOP VIDEO, AUDIO-GRAPHICS, AND

#### MEETING ROOM

#### TELECONFERENCING—

#### OFFER VERY DRAMATIC

#### ADVANTAGES

#### OVER AUDIO AND

#### COMPUTER

#### TELECONFERENCING.

*continued from page 55*

held in Dublin, Ireland, on September 8 and 9, 1993. The conference is organized into four separate sessions, focusing on Organizational, Technological, Social, and Business aspects of this important topic. The site is to be the Killiney Court Hotel, Killiney Bay, County Dublin. For more information or to reserve space at the conference, contact: Dr. Barbara Dooley, Department of Psychology, University College, Dublin 4,

Ireland, or telephone Dr. Dooley at: 011-353-1-706-2383.

### MALLORCA CONFERENCE

The European Community Telework Forum is holding a three-day international conference on telecommuting from

November 17–19, 1993. The site is Palma, on the island of Mallorca, in the Western Mediterranean Sea. Jack Nilles is coordinating a US Delegation to the conference. Details are sketchy at this point, but you can obtain more information on the conference by calling Andrew Page in Great Britain at 011-44-803-868377. Jack Nilles can offer more details of the planned US presence at the conference. You can reach him by calling (310)476-3703.

### SAN DIEGO TELECOMMUTING ASSOCIATION

The San Diego Telecommuting Association meets every second month from 8:30 to 10 pm at a variety of different locations in and around that city. Mike Johnson, a public information specialist in transportation for the San Diego County Air Pollution Control District, is chairman of the organization. Vice-Chairman John Riedy is a telecommuting consultant, and Treasurer Suz Marilao is a training specialist and coordinator of San Diego's largest

private industry telecommuting effort.

### BELLCORE IS EXPERIMENTING WITH TELECOMMUTING

More than three dozen employees of Bell Communications Research (Bellcore, the research consortium funded by the seven Bell operating companies) are participating in a six-month test of advanced ISDN technology for telecommuting. The main purpose of the trial, according to John Meyerle, project manager, is to demonstrate ISDN as a tool for telecommuters who must stay in close contact with colleagues and computer networks at the office. The ISDN services specifically under trial include: better collaboration between workers in separate locations by means of simultaneous two-way viewing and editing of computer documents, improved response to high-urgency business situations by means of simultaneous multiple use of a single ISDN line, and improved telecommuting to meetings by means of simultaneous voice and fax connections over a single ISDN telephone line. ■



# WIT...THE LAST WORD IN HIGH PERFORMANCE!

IBM TECHNOLOGY + AFFORDABILITY MAKES YOUR LIFE EASY!

IBM 486-SLC2-50 ISA....\$1100

(Manufactured By IBM)

IBM 486-SLC2-50 VLB.....\$900

(WIT Perfect Combinations)

IBM 486-SLC2-66 VLB.....\$960

(WIT Perfect Combinations)

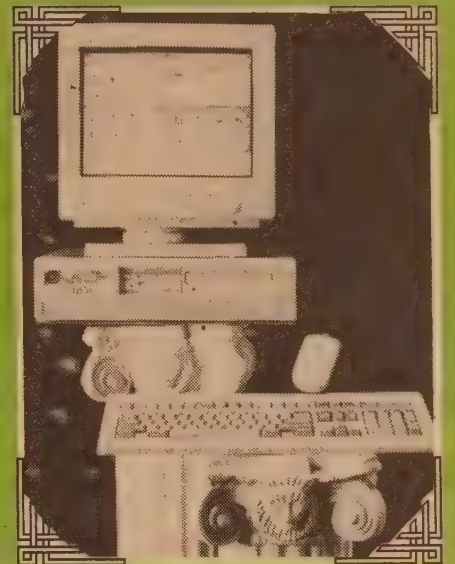
## Systems Include:

- 4 MB RAM • 120 MB HDD • 1.44 MB FDD • IDE & I/O Card
- SVGA .28 Monitor • SVGA Card w/1 MB • 101 Keyboard
- Case w/Power Supply

## # OF MIPS

Comparison IBM/Intel

|                |      |
|----------------|------|
| 486SX          | 10.7 |
| 486DX-33       | 14.8 |
| IBM 486 SLC-50 | 19.5 |
| 486DX2-50      | 20.0 |



## WIT HIGH PERFORMANCE SYSTEMS

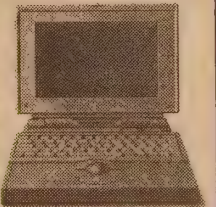
The Perfect Combination...Cutting Edge Technology and Affordability!  
These Great Systems Include:

|                                       |               |
|---------------------------------------|---------------|
| WIT VESA 486DX2-66/DX-40 w/256K Cache | \$1430/\$1250 |
| WIT VESA 486DX-50/DX-33 w/256K Cache  | \$1350/\$1230 |
| WIT ISA 486DX2-66/DX-40 w/256K Cache  | \$1360/\$1180 |
| WIT ISA 486DX-50/DX-33 w/256K Cache   | \$1240/\$1170 |
| WIT ISA 486SX-33/SX-25 w/256K Cache   | \$1050/\$980  |
| WIT 386DX-40 w/128K Cache             | \$920         |
| WIT 386SX-33                          | \$870         |

- 4 MB RAM
  - 1.2MB & 1.44 MB Floppy Drives
  - 120 MB Hard Drive
  - IDE FDD/HDD Controller
  - 2 Serial/1 Parallel/1 Game Port
  - Mini-Tower Case w/230W Power Supply
  - 101-K Keyboard
  - Windows Accelerator SVGA w/1 MB
  - 14" SVGA .28 dp Monitor
  - 72 Hour Burn-In & Fully Tested
- (Note VESA Local Bus Comes With 32-Bit VLB & 32-Bit VLB SVGA)

## WIT HIGH PERFORMANCE NOTEBOOKS

|                              |        |
|------------------------------|--------|
| 486-SLC33 VGA COLOR w/120 MB | \$1790 |
| 486-SLC33 VGA MONO w/120 MB  | \$1570 |
| 486-SLC25 VGA COLOR w/80 MB  | \$1A50 |
| 386-SL25 VGA COLOR w/80 MB   | \$1450 |
| 386SL25 VGA MONO w/80 MB     | \$675  |



## Systems Include:

- 2 MB RAM
- 1.44MB 3.5" FDD
- Color VGA LCD 640 x 480 Res, 9" diagonal
- Paper White VGA 10" LCD 640 x 480, 64 Gray Scale
- Ext VGA Port
- Connector for Docking Station
- 1 Par/1 Ser
- Dual Ni-CAD Batteries and Adapter
- 8.5"x11"x1.73" Only 5.7 Lbs
- Carrying Case
- Built-In 2-Button Trackball

## NOTEBOOK UPGRADES:

- 120 MB Hard Drive.....Add \$85
- FAX Modem.....Add \$110
- Memory Per MB.....Add \$55

## MULTIMEDIA PRODUCTS

|                          |       |
|--------------------------|-------|
| Sound Blaster Pro Deluxe | \$115 |
| Sound Blaster Pro ASP    | 195   |
| Speaker 25 Watt Pair     | 20    |
| CD-ROM Upgrade Kit       | 375   |
| Mitsumi CD Rom           | 175   |
| Sony 31A CD-ROM          | 175   |

## DRIVES

|                              |           |
|------------------------------|-----------|
| 120 MB/130 MB IDE HDD        | \$160/170 |
| 170 MB/210 MB IDE HDD        | 190/205   |
| 250 MB/340 MB IDE HDD        | 220/280   |
| 420 MB/540 MB IDE HDD        | 400/540   |
| Teac 1.2/Epson 1.2 FDD       | 50        |
| Teac 1.44/Epson 1.44 FDD     | 45        |
| Colorado 120 MB Tape Back-Up | 145       |
| Colorado 250 MB Tape Back-Up | 170       |
| Conner 250 MB Tape Back-Up   | 155       |
| Tape Cartridges              | 23        |

## CONTROLLERS

|                                     |      |
|-------------------------------------|------|
| ISA IDE 2FD/2HD w/2S/1P/1G          | \$15 |
| VESA IDE 2FD/2HD w/2S/1P/1G         | 35   |
| Vitex AT I/O (2S/1P/1G)             | 12   |
| Promise ISA IDE Cache Controller    | 100  |
| Promise VESA IDE Cache Controller   | 150  |
| Adaptec 1542C SCSI Controller       | 190  |
| Adaptec 1542CK SCSI II Controller   | 235  |
| Adaptec 2842VLK                     |      |
| VESA SCSI Controller                | 285  |
| Adaptec 2742TK EISA SCSI Controller | 380  |
| BusLogic 545S ISA SCSI Controller   | 215  |
| BusLogic 445S VLB SCSI Controller   | 245  |
| BusLogic 742A EISA SCSI Controller  | 275  |

## MODEM & FAXES

|                                    |      |
|------------------------------------|------|
| On-Line 2400 Modem w/9600 Send Fax | \$30 |
| On-Line Fax Modem                  |      |
| 9600 Fax/2400 Modem                | 45   |
| On-Line Fax Modem                  |      |
| 14400 Fax/14400 Modem              | 130  |
| On-Line Pocket Fax Modem           |      |
| 14400 Fax/14400 Modem              | 185  |

## MONITORS

|                               |      |
|-------------------------------|------|
| Eye-Q 14" Amber               | \$85 |
| Eye-Q 14" VGA Mono            | 105  |
| 14" SVGA 1024x768 .39         | 190  |
| 14" SVGA 1024x768 .28         | 230  |
| 14" SVGA 1024x768 .28 NI      | 250  |
| 15" SVGA 1280x1024 .28 NI     | 340  |
| 17" SVGA 1280x1024 .26 NI     | 740  |
| ViewSonic 6E SVGA .28 NI      | 295  |
| ViewSonic 15 1280x1024 .28 NI | 495  |
| ViewSonic 17 1280x1024 .28 NI | 1045 |
| ViewSonic 20 1600x1280 .28 NI | 1625 |
| ViewSonic 21 1600x1280 .29 NI | 1950 |
| NEC 3FG 15" 1024x768 .28 NI   | 575  |
| NEC 4FG 15" 1024x768 .28 NI   | 685  |
| NEC 5FG 17" 1024x768 .28 NI   | 1060 |
| NEC 6FG 21" 1280x1024 .28 NI  | 2280 |

## VIDEO CARDS

|                                   |      |
|-----------------------------------|------|
| Monographic Card                  | \$15 |
| VGA w/256K                        | 30   |
| SVGA w/1 MB w/Windows Accelerator | 55   |
| Cirrus Logic SVGA VLB w/1 MB      | 90   |

|                                    |     |
|------------------------------------|-----|
| ATI Ultra Pro ISA w/2 MB           | 315 |
| ATI Ultra Pro VLB w/2 MB           | 315 |
| ATI Ultra Pro EISA w/2 MB          | 385 |
| Diamond Stealth 24 VLB w/1 MB      | 155 |
| Diamond Stealth Pro VLB w/1 MB     | 255 |
| Diamond Stealth Pro VLB w/2 MB     | 325 |
| Diamond Viper VLB w/2 MB           | 375 |
| #9 Level 10 ISA w/1 MB             | 250 |
| #9 Level 11 ISA or VLB w/2 MB      | 360 |
| #9 Level 12 ISA or VLB w/3 MB      | 415 |
| Orchid Fahrenheit 1280 Plus w/1 MB | 140 |
| Orchid Fahrenheit VLB w/1 MB       | 145 |
| Orchid Fahrenheit VA ISA w/1 MB    | 165 |
| Orchid Fahrenheit VA VLB w/1 MB    | 175 |
| Orchid P9000 VLB w/3 MB            | 350 |

## WISC

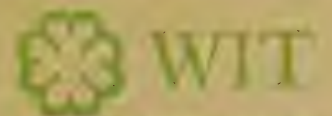
|                                     |      |
|-------------------------------------|------|
| AT Desktop 230W Power Supply        | \$40 |
| AT Full Tower 250W Power Supply     | 45   |
| PSII 230W Power Supply              | 35   |
| XT 150W/UL Power Supply             | 35   |
| Mini Tower Case w/230W PS           | 60   |
| Baby Desktop Case w/230W PS         | 65   |
| AT Full Desktop Case w/230W PS      | 85   |
| Mid Tower Case w/230W PS            | 80   |
| Full Tower Case w/250W PS           | 95   |
| Power Surge Protector               | 6    |
| Power Cable, IDE Cable or I/O Cable | 3    |
| 1 MB RAM (each)                     | 50   |
| 4 MB RAM (each)                     | 150  |
| CPU/Math Co-Processors              | CALL |
| CPU Cooling Fan                     | 15   |
| Microsoft Word for Windows          | 125  |
| Microsoft Excell                    | 125  |
| Microsoft Office                    | 395  |

## COMMITMENT TO SERVE YOU:

- 30 Day Money Back Guarantee Only for Complete System Packages.
- NO Restocking Charge
- 1 Years Parts/Lifetime Labor Warranty
- Customized Systems
- Government P.O.'s Welcome

## ALL AROUND SATISFACTION:

Stanford University, UC Berkeley, IBM, United Postal Service, Lockheed General Electric, AT&T, Quantum, Conner



(408) 433-0188

Fax: (408) 433-0310

Tech Support (408) 433-0709

World International Trade, Inc.

2075 OTOOLE AVE

SAN JOSE, CA 95131

SYSTEM UPGRADES, DIAGNOSTICS, & SERVICE AVAILABLE CALL FOR DETAILS



HOURS: Mon-Fri 9-5:30pm Saturday 10-3

Prices Subject To Change w/o Notice.



Call (408) 744-9009

# SUPER SALE

Fax (408) 744-9007

## THE BEST PRICE AND WARRANTY IN THE MARKET

FREE DELIVERY AND 24 HOUR CUSTOMER SUPPORT

| COMPUTER SYSTEM | DELL   | IBM PC | PACKARD BELL | XENOSYS  |
|-----------------|--------|--------|--------------|----------|
| WARRANTY        | 1 YEAR | 1 YEAR | 1 YEAR       | 3 YEARS* |

### XENOSYS ISA SYSTEMS

|                  |         |
|------------------|---------|
| 486SX-25 W/256K  | \$885   |
| 486DX-33 W/256K  | \$1,025 |
| 486DX2-50 W/256K | \$1,105 |
| 486DX-50 W/256K  | \$1,185 |
| 486DX2-66 W/256K | \$1,255 |

### XENOSYS VLB SYSTEMS

|                  |         |
|------------------|---------|
| 486DX-33 W/256K  | \$1,095 |
| 486DX2-50 W/256K | \$1,165 |
| 486DX-50 W/256K  | \$1,245 |
| 486DX2-66 W/256K | \$1,315 |

### XENOSYS EISA VESA SYSTEMS

|                   |         |
|-------------------|---------|
| 486DX-33 W/256K   | \$1,145 |
| 486DX2-50 W/256K  | \$1,215 |
| 486 DX-50 W/256K  | \$1,295 |
| 486 DX2-66 W/256K | \$1,365 |

ALL THE ABOVE SYSTEMS INCLUDE:

|                                      |                                  |                                               |                                  |                                      |                      |                                                 |
|--------------------------------------|----------------------------------|-----------------------------------------------|----------------------------------|--------------------------------------|----------------------|-------------------------------------------------|
| Motherboard W/CPU<br>4MB RAM (70 ns) | SVGA Card/1MB<br>or VLB Card 1MB | 120MB IDE (19ms) HD<br>AT I/O Card (2S/1P/1G) | Mini Tower Case W/PS<br>AMI BIOS | 1.44 FDD<br>IDE Controller (2HD/2FD) | 101 KB<br>FREE MOUSE | DOS 6.0 & Windows 3.1<br>Call for custom orders |
|--------------------------------------|----------------------------------|-----------------------------------------------|----------------------------------|--------------------------------------|----------------------|-------------------------------------------------|

## WINDOWS NT VLB DEVELOPERS WORKSTATION

|                              |             |                           |             |                |                |
|------------------------------|-------------|---------------------------|-------------|----------------|----------------|
| 486 DX2-66 VLB W/256K        | 340 SCSI HD | ADI Low Radiation Monitor | SCSI CD-ROM | Windows NT 3.1 | 1.2/1.44 FDD   |
| Toshiba 3401B 200ms, 330KB/s | VLB SVGA    | Adaptec SCSI CARD         | 16 MB RAM   | Windows NT SDK | CALL FOR PRICE |

|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|---------------|-------|-----------|---------------------------------|-------|--|----------------------------------|-------|--------------------------|---------------------------|--|--|
| <b>DRIVES</b> |       |           | <b>SOUND BOARDS/KITS</b>        |       |  | <b>CONTROLLERS</b>               |       |                          | <b>CASES/POWER SUPPLY</b> |  |  |
| <b>IDE:</b>   |       |           | Creative Labs                   |       |  | IDE 2H/2F.....                   | \$14  | Desktop.....             | \$48                      |  |  |
| ST            | 40MB  | 19ms..... | Discovery 16bit kit.....        | \$448 |  | IDE 4FD/2HDD.....                | \$32  | Medium Tower.....        | \$72                      |  |  |
| CON           | 80MB  | 19ms..... | Edutainment 16bit kit.....      | \$521 |  | IDE 2H/2F 2S/1P/1G UMC.....      | \$15  | Full Tower.....          | \$86                      |  |  |
| CON           | 85MB  | 19ms..... | Video Blaster.....              | \$318 |  | AT I/O 2S/1P/1G.....             | \$12  | Super Tower.....         | \$150                     |  |  |
| CON           | 120MB | 19ms..... | Sound Blaster Voice Editor..... | \$55  |  | AT I/O 2S,2P.....                | \$18  | XT PS.....               | \$30                      |  |  |
| ST            | 130MB | 15ms..... | Sound Blaster 16ASP.....        | \$199 |  | AT I/O HiSpeed.....              | \$30  | PS2 200/300W PS.....     | \$35/90                   |  |  |
| CON           | 170MB | 17ms..... | Software Development Kit.....   | \$91  |  | 4 Floppy Controller.....         | \$30  | Full Tower 300/400W..... | \$75/148                  |  |  |
| MXT           | 213MB | 15ms..... |                                 |       |  | IDE Caching Ultrastor.....       | \$195 |                          |                           |  |  |
| MXT           | 245MB | 15ms..... |                                 |       |  | IDE Local Bus.....               | \$190 |                          |                           |  |  |
| CON           | 250MB | 12ms..... |                                 |       |  | BT-4455 SCSI II VLB.....         | \$275 |                          |                           |  |  |
| MXT           | 345MB | 12ms..... |                                 |       |  | BT-542B ISA SCSI Kit.....        | \$225 |                          |                           |  |  |
| FUJ           | 425MB | 12ms..... |                                 |       |  | BT-742A EISA SCSI Kit.....       | \$299 |                          |                           |  |  |
| QUN           | 525MB | 10ms..... |                                 |       |  | Adaptec 15422B/6 Bit SCSI.....   | \$75  |                          |                           |  |  |
| CON           | 540MB | 10ms..... |                                 |       |  | Adaptec 1542C 16 Bit SCSI.....   | \$185 |                          |                           |  |  |
| MXT           | 540MB | 9ms.....  |                                 |       |  | Promise Local Bus.....           | \$45  |                          |                           |  |  |
|               |       |           |                                 |       |  | UltraStor SCSI 34F.....          |       |                          |                           |  |  |
|               |       |           |                                 |       |  | 32K Card 10 mb/s.....            | \$265 |                          |                           |  |  |
|               |       |           |                                 |       |  | UltraStor SCSI 34F, 32K Kit..... | \$322 |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |
|               |       |           |                                 |       |  |                                  |       |                          |                           |  |  |



**International Orders via Fax: (408) 988-0359**

## COUPON

**Customer..Cash or Check only.....Available at participating ASA Stores only.....Not valid with any other promotions.....Walk In service only...Limited Stock.....No Demos.....**

| *****TOP OF THE LINE LOCAL BUS GRAPHICS/CAD WORKSTATIONS***** |                          |                         |                     |                               |                         | add \$1499 for pentium CPU |  |
|---------------------------------------------------------------|--------------------------|-------------------------|---------------------|-------------------------------|-------------------------|----------------------------|--|
| SPECS                                                         | DIAMOND                  | ATI                     | ORCHID              | NUMBER NINE                   | MUSTANG                 | PEGASUS                    |  |
| Motherboard                                                   | DIAMOND Fastbus          | MICRONICS MX-30**       | ORCHID              | AMI Super Voyager**           | MUSTANG**ISAVESA        | PEGASUS**EISAVESA          |  |
| Power                                                         | 486-66 256K CACHE        | 486-66 256K CACHE       | 486-66 256K CACHE   | 486-66 256K CACHE             | 486-66 256K CACHE       | 486-66 256K CACHE          |  |
| Video Power*                                                  | 50 winmark               | 26 winmark              | 50 winmark          | 42 winmark                    | 54 winmark              | 54 winmark                 |  |
| RAM                                                           | 8MB-70 exp to 128MB      | 8MB-70 exp to 64MB      | 8MB-70 exp to 32MB  | 8MB-70 exp to 64MB            | 8MB-70 EXP TO 32        | 8MB-70 EXP TO 256MB        |  |
| BIOS                                                          | DIAMOND                  | PHOENIX                 | AMI                 | AMI                           | AMI                     | AMI                        |  |
| Exp. Slots                                                    | 2 VESA, 5 ISA            | 2 VESA, 6 ISA           | 2 VESA, 5 ISA       | 2 VESA, 6 ISA                 | 2 VESA, 5 ISA           | 2 VESA, 6 ISA              |  |
| Floppy Drives                                                 | 1, 2, 1, 44 Teac Drives  | Same                    | Same                | Same                          | Same                    | Same                       |  |
| HFC/O                                                         | 32 bit orchid VLB        | 32 bit orchid VLB       | 32 bit orchid VLB   | 32 bit orchid VLB             | 32 bit mustang VLB      | Promise w/2MB Cache        |  |
| Case, 230 UL                                                  | Med Tower 230 PS         | Same                    | Same                | Same                          | Same                    | Same                       |  |
| Keyboard                                                      | Keytronic/Maxi Switch    | Same                    | Same                | Same                          | Same                    | Same                       |  |
| Video Card                                                    | DIAMOND-VIPER            | ATI-ULTRA PRO           | ORCHID CELSIUS 9000 | #9 LEVEL 11                   | SPIDER BLACK WIDOW      | SPIDER BLACK WIDOW         |  |
| Spc. Features                                                 | 2MB VRAM                 | 2MB VRAM                | 1MB VRAM            | 2MB RAM                       | 1MB DRAM                | 1MB DRAM                   |  |
|                                                               | 1280X1024X256Clr 74Hz NT | 1280X1024X16Clr 74Hz NT |                     | Virtual rsltn upto 2048x1 024 | 1280x1024 16clr 60Hz NI | 1280x1024 16clr 60Hz NI    |  |
|                                                               | 1024x768x66kClr, 76Hz NT | Same                    | Same                | 1024x768x66kClr, 100Hz NI     | 1024x768 256clr 72Hz NI | 1024x768 256clr 72Hz NI    |  |
| 32bit Proc                                                    | WEITEK P9000             | MACH32                  | WEITEK P9000        | S3 928 GUI Accelerator        | S386C805                | S386C805                   |  |
| Video Mnfr #                                                  | 408-736-2000             | 416-756-0711            | 510-683-0300        | 617-674-0009                  | 408-956-1231            | 408-956-1231               |  |
| Price                                                         | \$1,726                  | \$1,858                 | \$1,541             | \$1,966                       | \$1,472                 | \$1,890                    |  |

Add Hard Drives. Monitors. Multi Media Components. And other peripherals as per your need. [Look at our other pages for specs and prices.]

\* PC magazine 2.5







## Monitors

|                                                      |             |
|------------------------------------------------------|-------------|
| <b>Nanao</b>                                         |             |
| F340W15" 28, 72Hz, MPRII, Microp. (\$655)            | \$689       |
| F550W17" FST1280N1, 31" (\$1075)                     | \$1075      |
| F760W 21" FST 1280N1, 31" (\$1008/1643)              | \$1008/1643 |
| T680W20" Trn, 1280, 72Hz, MPRII, Microp. (\$2400)    | \$2400      |
| F750 21", 31, 1280, 72Hz, Microp. (\$2028)           | \$2028      |
| <b>Hitachi</b>                                       |             |
| CM1785MV17" FST, 28, 1280N1, MPRII. (\$885)          | \$885       |
| CM2095 20" 1280 Anti Glare. (\$1280)                 | \$1280      |
| CM2087 20" 1280 76Hz Microp. (\$1580)                | \$1580      |
| CM2187 21" FST 1600x1280 Microp. (\$1990)            | \$1990      |
| ACCUVUEPS-21/APS-21, 28, Micr. (\$2249/2095)         | \$2249/2095 |
| <b>Sony</b>                                          |             |
| CPD1730 17" (\$967)                                  | \$967       |
| GDM2036S 20", 1280N1, MPRII. (\$1990)                | \$1990      |
| GDM2036 20" (\$2225)                                 | \$2225      |
| <b>Sampo</b>                                         |             |
| Sampo KDM77717" N 1200x1068, 26cp, MPRII. (\$989)    | \$989       |
| Sampo KDM2077 20" N 1200x1068, 31cp, MPRII. (\$1495) | \$1495      |
| <b>Magnavox</b>                                      |             |
| 20CM64 20", 1280N1, 31" (\$1250)                     | \$1250      |
| <b>NEC</b>                                           |             |
| 3FGE/4FGE 15", 28, 1024N1 (\$577/720)                | \$577/720   |
| 5FGE 17", 28, 1024N1 (\$1076) (\$1120)               | \$1076/1120 |
| 6FGE 21", 28, 1280N1 (\$2285) (\$2350)               | \$2285/2350 |
| <b>MAG</b>                                           |             |
| MX17F17" 28, 1260N1, Micro Org, Dem. (\$1000/835)    | \$1000/835  |
| LX1564 15" 28, 1280N1 (\$469)                        | \$469       |
| <b>PHILIPS</b>                                       |             |
| 1557AS 1024x768 (\$565)                              | \$565       |
| 1762DT 17", Trn, 25, 1280N1, Microp, MPRII. (\$1090) | \$1090      |
| 2082DC 20", Trn, 30, 1280, 72Hz. (\$1989)            | \$1989      |
| 2182DC 21" 28, 1600x1280, Microp, MPRII. (\$2459)    | \$2459      |

## CAD ADAPTERS

(Also See Local Bus and Adapters Sections)

## NUMBER NINE - #9GXI/GXE

|                                            |           |
|--------------------------------------------|-----------|
| L23 WINDACAD, T34020, 1280, 16C. (\$929)   | \$929     |
| L25F 40MHz/WIN/ACAD, 1280, 256C. (\$1195)  | \$1195    |
| L29 T34020, 1024x768x16.7M COLOR. (\$1315) | \$1315    |
| L11/12 S3928, 2MB/3MB VRA. (\$365/438)     | \$365/438 |

## HERCULES

|                                            |            |
|--------------------------------------------|------------|
| GRAPHITE1 MB, VRAM 1280 Accel. (\$289)     | \$289      |
| Chrome G731, 40MHz, 3MB, 72Hz. (\$1399)    | \$1399     |
| Super SX-P610821, 40MHz, 1MB. (\$749/1399) | \$749/1399 |

## MATROX

|                                              |               |
|----------------------------------------------|---------------|
| MGA-IMP/1A/IMP/2A/IMP/3A. (\$495/695/985)    | \$495/695/985 |
| Impression UltraXG3ASIC 1600, 7 MB. (\$3595) | \$3595        |

## METHUESS CORPORATION

|                                               |             |
|-----------------------------------------------|-------------|
| Premier 628VL45386C928, MultiDisplay. (\$619) | \$619       |
| 1104 Plus 256 Hz, MultiDisplay. (\$1295)      | \$1295      |
| UGA 1228Hz-256, 6074Hz. (\$1895/2095)         | \$1895/2095 |

## NATIONAL DESIGN

|                                       |        |
|---------------------------------------|--------|
| WARP24LB25C86C928, 2MB, 1280. (\$479) | \$479  |
| AT 1600 4+1MB, 1600. (\$2995)         | \$2995 |

## VIDEO SEVEN

|                                           |        |
|-------------------------------------------|--------|
| SPEAFIRE T134020, 1280X1024, 3D. (\$1349) | \$1349 |
| SPEA 1280 4MB, 1280X1024X256. (\$1849)    | \$1849 |

## MAIN BRANCH

## ASA COMPUTERS, INC.

2354 Calle Del Mundo  
Santa Clara, CA 95054

Tel: [800] 732-5727

Local Tel: [408] 727-3678

Fax: [408] 988-0359

Hours: M to F 9AM - 6:30PM

Sat. 10AM - 4PM

## SCANNERS

## PLOTTERS

## HOUSTON INSTRUMENTS

|                                          |        |
|------------------------------------------|--------|
| Im Maker 1117, A/B, 8 Pen, HPGL. (\$632) | \$632  |
| DMP-161 A-D, 8 Pen, HP-GL/2. (\$2825)    | \$2825 |
| DMP-162 A-E, 8 Pen, HP-GL/2. (\$3439)    | \$3439 |
| DMP-162R A-C, 8 Pen, Roll Med. (\$3975)  | \$3975 |
| V50(INKJET A-C SIZE). NEW. (\$1410)      | \$1410 |

## DIGITIZERS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS

## SUMMAGRAPHS



**ONE YEAR  
WARRANTY**

**AMT INTERNATIONAL**
**2393 QUME DRIVE, SAN JOSE, CA 95131**  
**(408) 432-1790 (408) 383-9044 FAX (408) 383-9047**
**LOWEST PRICES  
SAME DAY  
SHIPPING**

**386DX-40 AMD \$980**
**486DLC-33 Cyrix \$985**
**486SX-25 Intel \$1045**

- 128K Cache
- AMI BIOS
- 4 MB RAM-70ns
- 1.44 MB Teac Floppy Drive
- Conner 80 MB IDE Hard Drive
- IDE I/O 2FD/2HD, 2S/1P/1G Ports
- 512K SVGA Card
- 14" SVGA Monitor .28dp
- Chicony Keyboard 101 Key
- Mini/Desktop Case w/230W Power Supply

**486DX-33 Intel \$1260**
**486DX-50 Intel \$1389**
**486DX2-66 Intel \$1469**

- 128K Cache
- AMI BIOS
- 4 MB RAM-70ns
- 1.2 MB Teac Floppy Drive
- 1.44 MB Teac Floppy Drive
- 120 MB IDE Hard Drive
- IDE I/O 2FD/2HD, 2S/1P/1G Ports
- 512K SVGA Card
- 14" SVGA Monitor .28dp
- Chicony Keyboard 101 Key
- Mini/Desktop Case w/230W Power Supply

**486DX-33 Intel \$1469**
**486DX-50 Intel \$1639**
**486DX2-66 Intel \$1675**

- VESA LOCAL BUS Motherboard w/128K Cache, 2 VESA Slots
- AMI BIOS
- 4 MB RAM-70ns
- 1.2 MB Teac Floppy Drive
- 1.44 MB Teac Floppy Drive
- 213 MB IDE Hard Drive
- IDE I/O 2FD/2HD, 2S/1P/1G Ports
- VESA Local Bus Cirrus Logic Video Card w/1 MB
- 14" SVGA Monitor .28dp
- Maxi Keyboard 101 Key
- Mini/Desktop Case w/230W Power Supply

**486DX-33 Intel \$1669**
**486DX-50 Intel \$1820**
**486DX2-66 Intel \$1920**

- ORCHID Motherboard w/256K Cache, 2 VESA Slots
- AMI BIOS
- 4 MB RAM-70ns
- 1.2 MB Teac Floppy Drive
- 1.44 MB Teac Floppy Drive
- Maxtor 213 MB IDE Hard Drive
- VESA Local Bus IDE, Orchid I/O Card
- VESA Local Bus Fahrenheit Video Card w/1 MB-Orchid/Diamond
- 14" SVGA Monitor .28dp
- Maxi Keyboard 101 Key
- Mini/Desktop Case w/230W Power Supply

**MOTHERBOARDS**
**486-50 (EISA) 33/50 MHz CALL**

ISA  
486-50 Local Bus w/256K Cache w/CPU .....\$980  
486DX-33/50/66, 128K Cache w/o CPU ..... 105  
486DX-33/50/66, 256K Cache w/o CPU ..... 150  
386DX-33/486DX AMD Upgradable w/CPU .... 195  
386DX-40, 128K Cache w/o CPU ..... 98  
w/CPU ..... 160

**ALL-IN-ONE**

386SX-33 512K SVGA, IDE I/O .....\$165  
486SX-33 OK, 512K SVGA, IDE I/O w/CPU .... 170  
386SX-33 w/CPU ..... 120  
386SX-25 w/CPU ..... 99  
386SX-16 w/CPU ..... 59

**VESA LOCAL BUS**

ORCHID Motherboard, 256K Cache w/o CPU \$205  
ECS Motherboard, 128K Cache w/o CPU ..... 145

**VIDEO CARDS**

VESA Video Cards  
Orchid Fahrenheit, 1 MB, S3 .....\$170  
Diamond Stealth, 1 MB, S3 ..... 165  
Diamond Speedstar 1 MB ..... 135  
ATI Ultra Pro Graphics Pro 2 MB ..... 365  
Cirrus Logic, 1 MB ..... 105  
Orchid Viper ..... 340  
ISA Video Cards  
Orchid Fahrenheit, S3 .....\$180  
Diamond Star 24X ..... 170  
Trident 1 MB ..... 54  
Tseng Lab 1 MB ..... 85  
Trident 512K ..... 40  
Accumos 256K ..... 29

**MONITORS**

14" SVGA 0.28 .....\$240  
14" SVGA VESA 0.28 NI ..... 299  
Non-Int SVGA 0.28 ..... 255  
Sony 1304 ..... 579  
ViewSonic 4/6/5E/7 ..... 295/399/395/1099  
NEC 3FG/4FG/5FG ..... 659/749/1359  
Samsung 14" VGA (.31) ..... 260  
Samsung 14" SVGA (.28) ..... 240  
Samsung 15" SVGA (.28) ..... 475  
Samsung 17" SVGA (.31) ..... 789  
OTHERS ..... CALL

**HARD DRIVES**

**CONNER**  
44 MB IDE .....\$128  
89 MB IDE ..... 159  
130 MB IDE ..... 170  
170 MB IDE ..... 195  
210 MB IDE ..... 230  
340 MB IDE ..... 340  
520 MB IDE ..... 789  
**MAXTOR**  
80 MB IDE ..... 165  
130 MB IDE ..... 175  
213 MB IDE ..... 240  
340 MB IDE ..... 345  
340 MB SCSI ..... 545  
660 MB ..... CALL  
**QUANTUM**  
52 MB IDE ..... 165  
120 MB IDE ..... 210  
240 MB IDE ..... 265  
**SEAGATE**  
105 MB IDE ..... 205  
130 MB IDE ..... 215  
200 MB IDE ..... 345  
**CDC**  
91.5 MB SCSI ..... 199  
**FUJITSU**  
540 MB IDE ..... CALL

**FLOPPY DRIVES**

1.2 MB Teac 5.25" .....\$53  
1.44 MB Teac 3.5" ..... 47  
1.2 MB Samsung 5.25" ..... 49  
1.44 MB Samsung 3.5" ..... 45

**TAPE BACK-UPS**

120 MB Colorado .....\$146  
250 MB Colorado ..... 195  
500 MB Portable ..... CALL

**NETWORK CARDS**

Ethernet 8-Bit .....\$89  
Ethernet 16-Bit ..... 99  
14 Port 10 BaseT Hub ..... 539  
Arcnet 8-Bit ..... 49  
Arcnet 16-Bit ..... 59

Prices Subject To Change w/o Notice  
Not Responsible For Typographical Errors

**KEYBOARDS**

NORTH GATE/OMNI ..... CALL  
Keytronics 101 ..... 38  
Maxiswitch 101 ..... 32  
Chicony 101 ..... 28  
Focus 5001 w/Calculator ..... 65  
Mitsumi 101 Key ..... 30

**MISCELLANEOUS**

MS DOS 6.0 .....\$44  
MS DOS 5.0 ..... 40  
Windows 3.1 ..... 45  
6'/10' Printer Cable ..... 5/9  
Power Supply 150/220W ..... 39/49  
Monitor/Keyboard Ext Cable 10' ..... 7  
Printer Switch (AB/ABCD) ..... 10/20  
Sound Blaster Pro ..... 189  
Sound Blaster ..... 105  
CPU Fan ..... 14

**MICE**

Logitech Serial .....\$65  
Logitech Scanman Model 32 ..... 149  
Logitech Model 256 w/OCR ..... 365  
Microsoft Mouse ..... 89  
Logitech w/Windows 3.1 ..... 75  
Serial Mouse w/Pad ..... 14

**ADD-ON CARDS**

AT IDE I/O (2SPG, HD/FDC) .....\$20  
AT I/O (2SP, 1PP) ..... 13  
Bustek EISA SCSI ..... 345  
Apatec 1542 SCSI ..... 255  
DTC IDE I/O ..... 90  
Winbound IDE I/O ..... 57  
IDE w/Cache ..... 195  
IDE 4FD/2HD ..... 32  
VESA IDE Controller ..... 70  
Orchid IDE & I/O VESA ..... 80

**COMPUTER CASES**

Full Tower Case w/250W PS .....\$95  
Mid Tower Case w/230W PS ..... 79  
Mini Tower Case w/200W PS ..... 60  
Desk Top Case w/230W PS ..... 99  
Baby AT Case w/200W PS ..... 60  
Slim DeskTop Case w/200W PS ..... 85



**ONE YEAR  
WARRANTY**

**AMT INTERNATIONAL**

**LOWEST PRICES  
SAME DAY  
SHIPPING**

**2393 QUME DRIVE, SAN JOSE, CA 95131**

**(408) 432-1790 (408) 383-9044 FAX (408) 383-9047**

**QUANTITY PRICING FOR DEALERS & VARS, PLEASE CALL!!**

**MEMORY BOARDS FROM ACCULOGIC**

•**RAMpAT 16 BIT**  
Memory Up to 8 MB  
80286, 80386SX, 80386 **\$85**

•**RAMpAT PLUS**  
Memory Up to 8 MB  
For IBM PC, PC XT,  
PC/AT, PS/2 **\$125**

•**SIMMply-RAM FOR PS/2 16 BIT**  
Memory Up to 8 MB  
For PS/2-50, 50Z,  
60, 70, 80 **\$149**

•**SIMMply-RAM**  
Memory Up To 32 MB  
For PS/2-70,80,90 **\$159**

**FAX/MODEMS**

2400 bps MODEM (INT) ..... \$40  
9624 bps FAX/MODEM (INT) ..... 55  
9600 bps MODEM (INT) ..... 239  
9624 bps FAX MODEM ..... 139  
9624 bps POCKET MODEM ..... 139  
94/144 V.32/V.42 BPS ..... 199

**MEMORY UPGRADES- DUE TO THE RAPIDLY CHANGING PRICES CALL FOR THE LATEST PRICES!**

**SIMMS**

**IBM TYPE**

1x9-60 3 Chip ..... CALL  
1x9-70 3 Chip ..... CALL  
1x9-80 3 Chip ..... CALL  
1x9-80/70/60 9 chip ..... CALL  
1x9-80/70 3 chip ..... CALL  
4x8-60 ..... CALL  
4MB FX Apple ..... CALL  
1MB FX Apple ..... CALL  
16x9-70 ..... CALL

**MAC TYPE**

1x8-100 8 Chip ..... CALL  
1x8-80 2 Chip ..... CALL  
1x8-70 2 Chip ..... CALL  
1x8-80/70 8 Chip ..... CALL  
2x8-80/70 ..... CALL  
4x8-80/70 ..... CALL  
16x8-80/70 ..... CALL  
Mac IIfx 4/16 MB Kit ..... CALL  
256K VRAM ..... CALL  
512K VRAM ..... CALL  
16/32/64/128MB Kits for  
Quadra 700/900 & Mac IIfx, ci ..... CALL  
NEW 72 PIN SIMM for MAC LCII & CENTRIS ..... CALL

**72 PIN SIMMS (36 BIT)**

256Kx36-10/80/70 ..... CALL  
512Kx36-80 ..... CALL  
512Kx36-70 ..... CALL  
1x36-80/70 ..... CALL  
1x36-60 ..... CALL  
2x36-80/70/60 ..... CALL  
4x36-80/70 ..... CALL  
8x36-70 NEW ..... CALL  
32 BIT SIMMS ALSO AVAILABLE

**DRAMS**

**DRAMS**

256x1-80 ..... CALL  
256x1-100 ..... CALL  
256x1-120 ..... CALL  
256x4-70/80 ..... CALL  
64x4-80/100 ..... CALL  
1x4-80 DIPP ..... CALL  
1MBx1-70 ..... CALL  
1MBx1-80 ..... CALL  
SOJ ..... CALL

**ZIPPS**

64x4-10/12 Page, 18pin ..... \$4.50  
256x4-80/70 Page, 20pin ..... 5  
256x4 Video Page 28pin ..... 8  
256x4 Video 28pin ..... 10  
1x4-80/70 Page 20pin ..... 17  
1x4-80/70 Page 20pin DIPP ..... 20

**CACHE MEMORY**

32Kx8-20 ..... \$4.95  
32Kx8-15 ..... 5.00  
64x4-20 ..... 6.00  
64x4-15 ..... 9.50  
8Kx8-20 ..... 2.75  
8Kx8-15 ..... 3.00  
16Kx4-20 ..... 2.75  
16Kx4-15 ..... 3.00  
64x1-20 ..... 5.75  
64x1-15 ..... 5.50  
128x8-2 ..... 38  
128x8-25 ..... 32

**MATH CO's**

**INTEL/CYRIX/ULSI**

287-10 ..... \$28/29  
8087-1/2/3 ..... 79/69/29  
287XL Intel Tube ..... 39  
387SL Intel Tube ..... 65  
387SX-16/20 ..... 45/64  
387SX-25 Cyrix ..... 59  
387SX-33 ULSI ..... 59  
387DX-20 Intel Tube Box ..... 34  
387DX-25 Intel ..... 39  
387DX-33 Intel Tube ..... 59  
387DX-40 Cyrix/IIT ..... 69  
4167-25/33 Weitek ..... 325/565  
CALL FOR PRICING ON IIT, ULSI & WEITEK

**LASER PRINTER MEMORY**

Price Includes Memory, Board  
& Installation Instructions

**IBM LASER**

4019/4019E 1/2/3.5 MB ..... \$89/119/179  
4029 (All Model) 4 MB ..... 169

**EPSON LASER**

6000-2/4MB ..... \$114/175  
7000-2/3 MB ..... 125/179  
Action LaserII-2/3/4/5 MB ..... 108/139/169/199

**HP LASER**

HP II/IID 2/4 MB Board ..... \$105/179  
HP 4/4M 4/8MB ..... 149/289  
HP IIP, IIP+, IIL, IILD, IIP 1/2/3/4 ..... 60/95/134/179  
IISI 4/8 MB ..... 138/299  
LaserJet Fax 1 MB ..... 82  
DeskJet 500/500c 550C 256K ..... 69  
Design Jet Plotter 4 MB ..... 144

**PANASONIC LASER**

KXP4410/KXP4430 1/2/3/4 MB .. \$89/115/149/184  
KXP4420/4450/4451 1/2/3/4 MB ..... 79/108/139/179  
KXP4450 1 MB ..... 111  
KXP4455 2 MB ..... 129

**OKI LASER**

OL400 1/2 MB Board ..... \$84/106  
OL800/820 2/4 MB Board ..... 107/179  
OL810 2/3/4 MB Board ..... 145/179/219

**QMS LASER**

PS 410 2/3/4 MB ..... \$119/165/189  
PS 860, 1700 1/4/8 MB ..... 53/133/166  
PS 815, 825, 815MR, 2/4/6 ..... 168/232/295

**SHARP LASER**

9500PS 1 MB ..... \$55  
JX-9500/9700 1/1.5/2.5/4 ... 105/135/188/344

**OTHERS**

Apple Laserwriter II/IINTX 4 MB .. \$169  
Brother HL-4 2/3/4 MB ..... 119/165/189  
Brother HL-8E V 1/2 MB ..... 99/139  
Compaq Pagemarq 15 & 20 1/4/8 ..... 49/139/266  
Fujitsu RX7100/7200 1/2 MB ..... 185/245  
Kyocera F800, F800Am F800T 2/4 ..... 95/137  
NEC Silentwriter 90/290 ..... 99/124  
NEC Silentwriter 95 2 MB ..... 104  
TI Microlaser 1 MB ..... 55

**DELL MEMORY**

| Model                                      | P/N                 |
|--------------------------------------------|---------------------|
| 433P, 33P, 325P, 33D, 325D                 |                     |
| 1 MB                                       | 310-2505 ..... \$44 |
| 4 MB                                       | 310-2507 ..... 155  |
| 433TE, 425TE & Powerline Workstation       |                     |
| 2 MB                                       | 310-2466 ..... 109  |
| 4 MB                                       | 310-2467 ..... 175  |
| 8 MB                                       | 310-2468 ..... 319  |
| 16 MB                                      | 310-2469 ..... 649  |
| Power Desktop 486D, D/33, D/25, D/20, D/66 |                     |
| 1 MB                                       | 310-2505 ..... \$44 |
| 4 MB                                       | 310-2507 ..... 155  |
| 16 MB                                      | 310-2625 ..... 595  |
| OTHER MODELS                               | CALL                |

**CPU CHIPS**

Cyrix 486DLC 25/33/40 ..... \$65/79/110  
INTEL 486DX-33/50/2-50/2-66 ..... 265/410/370/470  
INTEL 486SX-20/25/33 ..... 85/95/170

**TEAC FLOPPY DRIVES**

1.44 MB ..... \$55  
1.2 MB ..... \$57  
Dual Floppy 1.2/1.44 ..... 145  
Heat Sink w/Fan For 486's ..... 25

**TERMS AND CONDITIONS**

1. AMT Will Meet Or Beat Any Advertised Price!
2. Full Five Year Warranty With All AMT Upgrades!
3. Gov't, University And Qualified Firms PO'S Welcome
4. U.S. and International Shipping VIA UPS, DHL and Federal Express.
5. All Sales Must Include Sales Tax
6. All Sales Must Be C.O.D. Cashier/Certified Checks
7. There Is A 15% restocking Charge For All Refused Merchandise
8. Prices Subject To Change W/O Notice, Not Responsible For Typo's
9. Call For Latest Prices

**HOURS: MON-FRI 8am-6pm**

**COMPAQ MEMORY**

| Model                                                                 | P/N                         |
|-----------------------------------------------------------------------|-----------------------------|
| LTE 286                                                               | 2 MB 117081-002 .... \$115  |
|                                                                       | 4 MB 117081-003 ..... 175   |
| SLT 286                                                               | 4 MB 110237-001 ..... 299   |
| LTE 386S/20                                                           | 2 MB 12125-001 ..... 119    |
|                                                                       | 4 MB 121125-002 ..... 195   |
| Contura Lite 20/25                                                    | 2 MB 129769-001 ..... 105   |
|                                                                       | 4 MB 129769-002 ..... 155   |
|                                                                       | 8 MB 129769-003 ..... 295   |
| Portable 386                                                          | 1 MB 107651-001 ..... 109   |
|                                                                       | 4 MB 107653-001 ..... 299   |
| Portable III                                                          | 2 MB 10-7332-001 ..... 79   |
|                                                                       | EBD 167811-001 ..... 199    |
| SLT 386                                                               | 2 MB 118304-001 ..... 119   |
|                                                                       | 4 MB 118305-001 ..... 185   |
| Deskpro 386S (E. Board)                                               | 4 MB 11364-001 ..... 239    |
|                                                                       | 4 MB 112534-001 ..... 169   |
| Deskpro 386/33L, 486/33L, 50/25                                       | 2 MB 115144-001 ..... 99    |
|                                                                       | 8 MB 116561-001 ..... 335   |
|                                                                       | 32 MB 116568-001 ..... 1275 |
|                                                                       | 6 Socket E Board ..... CALL |
| Deskpro 386/20e, 25e (E. Board)                                       | 4 MB 113645-001 ..... 99    |
|                                                                       | 8 MB 116561-001 ..... 335   |
|                                                                       | 32 MB 116568-001 ..... 1275 |
| Deskpro 386/20e, 25e (E. Board)                                       | 4 MB 113645-001 ..... 239   |
| Deskpro 386/20, 20e, 25e                                              | 4 MB 113132-001 ..... 169   |
| Deskpro 286N, 386N, 386SX/20,<br>386/25M, 486/33M, 486S/25M, 486S/16M | 2 MB 118689-001 ..... 95    |
|                                                                       | 4 MB 118690-001 ..... 145   |
|                                                                       | 8 MB 128877-001 ..... 294   |
| Deskpro 486/33L, 486/50L, 386/33L ..... CALL                          |                             |
| Prolinea 3/255 & 3/252S                                               | 2 MB 141738-001 ..... 105   |
|                                                                       | 8 MB 141742-001 ..... 375   |
| Prolinea 4/33                                                         | 2 MB 141682-001 ..... 95    |
|                                                                       | 4 MB 141684-001 ..... 159   |
|                                                                       | 8 MB 141685-001 ..... 299   |
| Other Models                                                          | CALL                        |

**TOSHIBA MEMORY**

|                       |                         |
|-----------------------|-------------------------|
| T8500, T5200          | 2 MB ..... 105/335      |
| T5100, T3100, T1600   | 2 MB ..... 84           |
| T3100SX               | 2/4 MB ..... 105/157    |
| T3200SX, SXC          | 2/4 MB ..... 99/157     |
| T4400SX, SXC, T6400   | 2/4 MB ..... 135/219    |
|                       | 8/16 MB ..... 157/249   |
| T3300SL               | 1/2 MB ..... 99/129     |
| T3100                 | 2 MB ..... 109          |
| T2200SX, SXE, T1000LE | 2/4/8MB ... 105/157/279 |
| T1800 Satellite       | 2/4/8 MB .. 109/159/279 |

**NEC MEMORY**

Prospect 286, 386SX/16  
1/2/4 MB .. \$99/165/229  
Prospect 386 2/4 MB ..... 165/419  
Prospect SX/20 1/4 MB ..... 105/229  
Powermate 386/25S 2/8MB ..... 129/359  
Powermate 486/25E, 486/331 2/8 MB ..... 85/345  
Powermate Express Series  
1/4/16 MB .69/169/595  
Other Models ..... CALL

**LIFETIME WARRANTY**

|                           |                           |
|---------------------------|---------------------------|
| Altima LSX                | 2/4 MB ..... 165/249      |
| Avanti                    | 2/4 MB ..... 74/145       |
| AST Premium Exec          | 1/4 MB ..... 75/134       |
| AST Power Exec 3/25       | 4/8/16 MB ..... CALL      |
| Compaq Contura Lite 20/25 | 2/4/8 MB ... 105/155/295  |
| Chaplet Notebook          | 2/4 MB ..... 155/249      |
| Chicony 386SX             | 4 MB ..... 189            |
| Chicony 386SL/25          | 2/4 MB ..... 129/229      |
| DECPC 320P                | 2/4/6 MB ... 195/269/389  |
| DELL 320N & 212N          | 1/2 MB ..... 85/125       |
| DELL 320N, NC             | 2 MB ..... 125            |
| DELL 325N, NC             | 2 MB ..... 179            |
| DELL N125, N120           | 2 MB ..... 179            |
| Epson NBS3                | 1/4 MB ..... 98/225       |
| Everex Tempo LX           | 2 MB ..... 88             |
| HP 95LX                   | 1/2 MB ..... 159/279      |
| IBM 140SX, N33/SX         | 2/4/8 MB ... 99/155/299   |
| IBM N51SX & SLC           | 1/4/8 MB ..... 99/155/299 |
| IBM PS/2 N45 SL           | 2 MB ..... 179            |
| MAC PB 160, 180           | 6/10 MB ..... 249/425     |
| MAC PB 140, 170           | 2/4/6 MB ... 89/175/229   |
| MAC PB 100                | 2/4/6 MB ..... 89/179/239 |
| Magnavox Metalis 386SX    | 4 MB ..... 199            |
| NEC Ultralite 286F        | 1/4 MB ..... 99/199       |
| Packard Bell 386SX        | 1/4 MB ..... 99/229       |
| Panasonic CF 170/270/370  | 1/2 MB ..... 65/99        |
| Sharp PC 8501             | 2 MB ..... 105            |
| Sharp 678/6881            | 2 MB ..... 129            |
| Sampo NB SX/26, SX/25     | 2/4 MB ..... 145/225      |
| TI Travelmate 2000        | 1 MB ..... 77             |
| TI Travelmate 3000        | 2 MB ..... 69             |
| TI Travelmate 4000        | 4 MB ..... 219            |
| Zenith Turbosport 386 E   | 1/4 MB ..... 95/299       |
| Zenith Supersport SX      | 2 MB ..... 145            |
| Zenith Mastersport        | 2 MB ..... 99             |

**IBM PS/2 & PS/1 MEMORY**

|                                         |                              |
|-----------------------------------------|------------------------------|
| PS/1 286/386SX                          | 2/4 MB ..... \$95/149        |
| PS/1 Consultant                         |                              |
| Essential/Expert                        | 1/2/4/8 MB ... 45/79/155/299 |
| 386 Valuepoint                          | 2/4/8 MB ..... 89/159/305    |
| 486 Valuepoint                          | 4/16 MB ..... 169/595        |
| PS/2 30-286                             | 2 MB ..... 89                |
| 50Z, 55SX, 65SX, 70                     | 2/4 MB ..... 79/145          |
| 40SX, 35SX, 35SL                        | 2/4 MB ..... 79/149          |
| 70A21, A61, 121                         | 2 MB ..... 109               |
| 80-11, 121, 311                         | 4 MB ..... 210               |
| 95,90,P75, PS/1 Pro                     |                              |
| 16 Bit Exp Bd For 50, 50Z, 60, 65SX     | OK                           |
| 32 Bit Exp Board for all 70 & 80 models | OK                           |
| RISC 6000                               | 16/32/64 MB .. 745/1490/2890 |
| Other Models                            | CALL                         |

**AST MEMORY**

|                                |                           |
|--------------------------------|---------------------------|
| Bravo 3/33(LC) 325S            | 2/8 MB ..... \$84/299     |
| Bravo 486/25 & 4/33            | 2/8 MB ..... 109/309      |
| Bravo 486LC                    | 4/8/16 MB ... 145/295/565 |
| Cupid-32 Board                 | OK ..... 219              |
| Premium 386C                   | 4 MB ..... 145            |
| Premium SE 450                 | 4 MB ..... 145            |
| Premium 386/25, SX, 33, 486/25 | 1 MB ..... 40             |
| Premium II 386, 486            | 1/4 MB ..... 37/145       |
| Executive Notebook             | 4 MB ..... 134            |
| Other Models                   | CALL                      |

**SUN MEMORY**

|                        |                         |
|------------------------|-------------------------|
| SPARC SLC              | 4 MB ..... \$145        |
| 3/60, 80, 4/40, 60, 65 | 4/16 MB ..... 139/495   |
| SPARC 1 & 1+, 1Pc      | 4/16 MB ..... 140/499   |
| SPARC 10               | 16/64 MB ..... 645/CALL |
| SUN Classic            | 16 MB ..... 625         |
| SPARC Server 630np     | 64 MB ..... 2285        |
| SUN IPX, ELC           | 4/16 MB ..... 175/555   |
| SPARC II               | 16 MB ..... 560         |
| Other Models           | CALL                    |



# ART COMPUTER TECH INC.

424 S.MAIN STREET., MILPITAS, CA

Tel. (408) 946-7852 \* Fax (408) 946-7892

Make us your last stop, We offer the best price.

Be Smart! Join our satisfied customers

AMD, ADAPTEC, CIRRUS LOGIC, UC DAVIS, CONDUCTUS, ASTEC, ELANTEC, SEAGATE, STANFORD UNIVERSITY, UC BERKELEY, LAWRENCE LIVERMORE LAB, ANALOG DEVICES, FRANK & RIVERMAN CPA, ACUSON, MADERA CITY POLICE DEPT, NASA, ALLIED ENGINEER, TESTERION, ACSYS, LOGITECH and many more

| SYSTEM                        | MainBoard CPU | Basic System |
|-------------------------------|---------------|--------------|
| 486DX2-66/256K PCI            | \$797         | \$943        |
| 486DX-50/256K PCI             | \$737         | \$883        |
| 486DX-33/256K PCI             | \$591         | \$738        |
| 486DX2-66/128K VLB            | \$556         | \$697        |
| 486DX-50/128K VLB             | \$499         | \$640        |
| 486DX-33/128K VLB             | \$358         | \$499        |
| 486DX2-66/128K ISA            | \$547         | \$687        |
| 486DX-50/128K ISA             | \$489         | \$630        |
| 486DX-33/128K ISA             | \$349         | \$490        |
| 486SLC2-66/64K VLB            | \$343         | \$484        |
| 486SLC2-50/64K VLB            | \$286         | \$426        |
| 486DLC-40/64K ISA             | \$152         | \$298        |
| 486DLC-33/64K ISA             | \$134         | \$281        |
| 486DX2-66/256K NICE EISA VESA | \$689         | \$830        |
| 486DX-50/256K NICE EISA VESA  | \$632         | \$773        |
| 486DX-33/256K NICE EISA VESA  | \$491         | \$632        |
| 486DX2-66/256K ORCHID VLB     | \$605         | \$746        |
| 486DX-33/256K ORCHID VLB      | \$407         | \$548        |
| 386DX-40/64K ISA              | \$121         | \$249        |

## SPECIAL BASIC

- \* Motherboard w/CPU+4MB RAM 70ns
- \* 1.2 and 1.44MB FDD
- \* IDE 2FD/2HD Controller
- \* AT I/O 2S/1P/1G
- \* 120MB Hard Drive
- \* 1024x768 .28DP 14" SVGA Monitor
- \* 512K SVGA Card
- \* 101 Enhanced Keyboard
- \* Enhanced Case w/230 Watt Power Supply
- \* Microsoft Compatible Mouse
- \* Mouse Pad

|                                |        |
|--------------------------------|--------|
| 486DX2-66/256K PCI             | \$1565 |
| 486DX2-50/256K PCI             | 1506   |
| 486DX2-33/256K PCI             | 1360   |
| 486 DX2-66/128K VESA LOCAL BUS | 1296   |
| 486 DX-50/128K VESA LOCAL BUS  | 1239   |
| 486 DX-33/128K VESA LOCAL BUS  | 1098   |
| 486 DX2-66/128K ISA            | 1287   |
| 486 DX-50/128K ISA             | 1229   |
| 486 DX-33/128K ISA             | 1089   |
| 486 SLC2-66/64K VLB            | 1083   |
| 486 SLC2-50/64K VLB            | 1026   |
| 486 DLC 40/64K CACHE           | 897    |
| 486 DLC-33/64K CACHE           | 877    |
| 486 DX2-66/256K NICE EISA VESA | 1429   |
| 486 DX-50/256K NICE EISA VESA  | 1372   |
| 486 DX-33/256K NICE EISA VESA  | 1231   |
| 486 DX2-66/256K Orchid VLB     | 1345   |
| 486 DX-33/256K Orchid VLB      | 1147   |
| 386 40/64K CACHE               | 847    |

## VLB VIDEO Card w/IDE+I/O

\$120

## MICROSOFT

COMPATIBLE MOUSE

\$6

+ MULTIMEDIA POWER w/CDROM + 4 CD Titles  
+ SOUNDBLASTER Pro+ 2 Speakers

\$325

## OPTIONS

|                        | ADD |
|------------------------|-----|
| -Non-Int Monitor       | 500 |
| -Viewsonic 6E Monitor  | 50  |
| -KFC 16" Non-Int       | 160 |
| -PCI Graphic Card 1MB  | 200 |
| -SPIDER BlackWidow 1M  | 160 |
| -LocalBus SPIDER       | 50  |
| -Luminar 240bits 1MB   | 25  |
| -Trident 1MB           | 20  |
| -170MB Hard Drive      | 30  |
| -Orchid Farenheit VLB  | 60  |
| -Orchid Farenheit 1280 | 100 |
| -250 MB Hard Drive     | 50  |
| -340 MB Hard Drive     | 100 |
| -IDE VESA Localbus     | 25  |
| -Medium case           | 25  |
| -Full Tower            | 40  |
| -Logitech Mouse        | 35  |
| -Microsoft mouse       | 35  |
| -486 DLC 40 MathCo     | 55  |
| -486 DLC 33 MathCo     | 20  |

BASIC SYSTEM includes: Motherboard & CPU, 1MB RAM, 1:1 2HD/2FD controller, w/ 1P/2S/1G, 1.2 or 1.44 MB FD, enhanced case w/Power supply, 101 Keyboard.

### NEW HARD DRIVES

|                                  |      |
|----------------------------------|------|
| 80mb/18ms (IDE) Conner CP30084E  | 146  |
| 120mb (IDE) Conner CP30104       | 180  |
| 130mb/15ms (IDE) Maxtor 7120AT   | 180  |
| 170mb/18ms (IDE) Conner CP30124  | 173  |
| 213mb (IDE) Maxtor 2213AT        | 217  |
| 245mb/15ms (IDE) Maxtor          | 220  |
| 250mb/15ms (IDE) Conner          | 220  |
| 340mb/13ms (IDE) Maxtor LXT340AT | 296  |
| 1 GB Toshiba MK537FB             | 780  |
| 1.2 GB - 13ms (SCCI) Fujitsu     | 1090 |
| 1.7 GB - 13ms (SCCI) Maxtor      | 1130 |

### CD ROMS

|                                  |       |
|----------------------------------|-------|
| SoundBlaster Pro 16 ASP          | \$195 |
| Mitsumi CD ROM w/Card (350ms)    | 170   |
| NEC CD ROM 84M (280ms)           | 410   |
| SONY CD ROM 31A (490ms)          | 185   |
| MultiMedia Power w/ CD ROM+      |       |
| SoundBlaster Pro+5 CD titles     | 360   |
| Creative Lab Soundblaster        | 67    |
| Creative Lab Soundblaster Pro    | 110   |
| MEDIAVISION ProAudio Spectrum 16 | 160   |
| Pro16 MultiMedia System          | 640   |
| TOSHIBA CDROM 3401 (200ms)       | 399   |
| Texel CD ROM DM 3024N            | 347   |

### PRINTERS

|                         |               |
|-------------------------|---------------|
| Panasonic KX-P1123/2023 | \$169/198     |
| Panasonic KX-P1124/1624 | 239/348       |
| Panasonic KX-P2180/2123 | 157/218       |
| Panasonic KX-P2124/2624 | 318/377       |
| HP DeskJet 500/500C     | 289/398       |
| HP DeskJet 550C/HP 4L   | 589/870       |
| HP IIIP/HP IV/HP 4M     | 889/1348/1850 |

### VIDEO CARDS

|                                        |      |
|----------------------------------------|------|
| Trident VGA-521 (1024x768, 16 bit)     | \$36 |
| Trident 1MB (1024x768, 16 bit)         | 56   |
| Luminar 24BITS 18M colors              | 70   |
| Diamond SpeedStar Pro ISA w/1MB        | 117  |
| Diamond SpeedStar Pro VLB w/1MB        | 117  |
| Diamond Stealth 24VESA Local bus w/1MB | 184  |
| Diamond Stealth Pro VRAM w/2MB         | 346  |
| Diamond Viper VESA Localbus w/2MB      | 380  |
| SPIDER 32VESA Local Bus w/1MB          | 94   |
| SPIDER 32VLB Plus w/1MB                | 120  |
| SPIDER BlackWidow VLB w/1MB            | 199  |
| Orchid Farenheit 1280Plus w/1MB        | 135  |
| Orchid Farenheit Localbus w/1MB        | 135  |
| Orchid Farenheit VA VLB                | 157  |
| Orchid Celsius                         | 190  |
| ATI Graphic Ultra plus w/2MB           | 230  |
| ATI Graphic Ultra Pro w/2MB            | 340  |
| ATI Graphic Ultra Pro VLB w/2MB        | 340  |
| ATI Graphic Ultra w/mouse              | 180  |

### MONITORS

|                                       |               |
|---------------------------------------|---------------|
| Nanao F550w (17", 1280x1024, 0.28)    | \$1,085       |
| Nanao F340w                           | 654           |
| NEC 3FGE/4FGE                         | 574/674       |
| NEC 5FGE/6FGE                         | 1,067/2,298   |
| MAG 15F (1280x1024, 0.28)             | 518           |
| MAG 17F (1280x1024, 0.28)             | 825           |
| SONY CPD 1304s/1430                   | 518/568       |
| SONY CPD 1604s (17")/1730             | 898/968       |
| HITACHI CM-2095(20")/2187 (21")       | 1280/1880     |
| Super VGA (1024x768) monitor 0.28     | 240           |
| Super VGA Non-Interlaced Monitor 0.28 | 255           |
| Viewsonic 4E/5E/5+                    | 264/355/447   |
| Viewsonic 6E/7                        | 285/865       |
| Viewsonic 15/17/20                    | 470/1020/1640 |

### CONTROLLER CARDS

|                                     |         |
|-------------------------------------|---------|
| Orchid IDE VLB w/ IO                | \$59    |
| IDE 4FD/2HD                         | 35      |
| Promise IDE cache controller DC 200 | 98      |
| Promise VL Controller DC1430VL      | 150     |
| VESA Localbus IDE                   | 40      |
| IO with 2s/1p/1g                    | 12      |
| Monochrome card                     | 12      |
| Adaptec SCSI 1542C/1542C w/Kit      | 185/232 |
| Adaptec 1640VLB/1742EISA SCSI       | 240/338 |

### KEYBOARDS

|                       |       |
|-----------------------|-------|
| 101 Enhanced keyboard | \$20  |
| Maxswitch             | 30    |
| Keytronics            | 34    |
| Focus 2001/8000       | 36/80 |
| Omnkey 102/Ultra      | 65/86 |

### MISCELLANEOUS

|                                    |          |
|------------------------------------|----------|
| Internal Modem 2400 Baud           | \$26     |
| Fax Modem (9600 F, 2400 M)/Window  | 45       |
| Fax Modem (14400 F, 14400 M)       | 130      |
| US Robotics Modem 9600/14,400      | 148/168  |
| US Robotics Fax/Modem 14,400       | 175      |
| 3-Button mouse                     | 10       |
| Microsoft mouse serial/bus/new     | 43/65/50 |
| Logitech Mouseman serial (4000dpi) | 42       |
| Logitech Mouseman Bus (4000dpi)    | 58       |
| Colorado Tape backup DJ-10 120M    | 138      |
| Colorado Tape backup DJ-20 250M    | 168      |
| Colorado Trakker 120MB             | 288      |
| Colorado Trakker 250MB             | 368      |
| Baby AT/Mini Tower case w/230W PS  | 49       |
| Medium Tower case 2/230W PS        | 80       |
| Full Tower case w/230W PS          | 93       |

Prices & availability subject to change without notice.

\* We accept VISA & MasterCard  
Not responsible for typographical errors.  
Prices listed are suggested prices.  
Government & Education  
Company discounts available  
upon approval.

424 S Main Street  
Milpitas, CA 95035.

Tel. (408) 946-7852

Fax. (408) 946-7892

Bus Hrs: Mon-Fri: 9:30-6:00  
Sat-Sun: 11:30-4:00





# PIONEX Non-Interlaced SVGA Color Monitor

**PIONEX Introduces A New Modular Designed Technology in Their Monitors With Larger Image Area Than Other 14" Monitors.**

- 14" Monitor
- SVGA Non-Interlaced Color
- 1024 x 768 Resolution
- .28mm Dot Pitch



**Call for Dealer Pricing & More Information**

## 486-33 MHz VESA MOTHERBOARD

**Our VESA Local Bus increases performance not the price!**

Enjoy the extraordinary increased performance of VESA Local Bus without paying hundreds more.

Your graphics throughput could be 50 times faster than a standard SVGA Card. That's because our VESA Local Bus transports your images on a very wide 32-bit super highway. They're also zooming along at the computer's clock speed, instead of 8MHz. Those images avoid bottlenecks because the local bus card connects directly with the CPU.

Future upgrades will be a snap because loads of companies will be competing to sell you VESA peripherals. We'd never stick you with a system that had no upgrade potential.

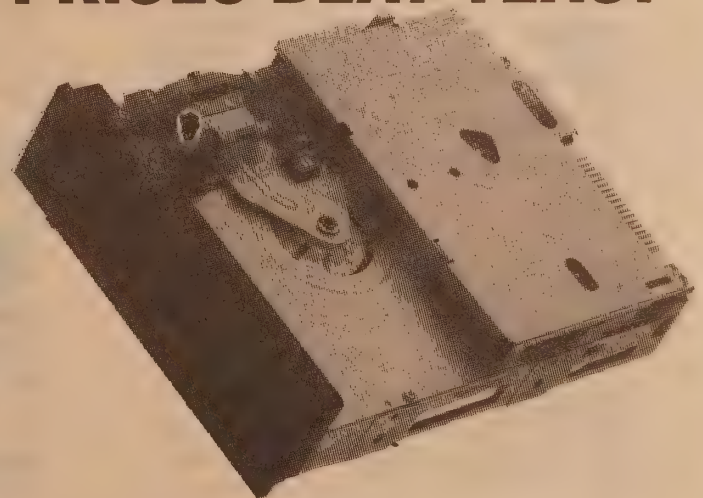
## MULTI-MEDIA SYSTEM 486-33 MHz SYSTEM \$CALL

### INCLUDES:

- ✓ INTEL 33 MHZ 80486 MICRO-PROCESSOR
- ✓ 4 MB RAM EXP. TO 32 MB ON THE BOARD
- ✓ 1.2 MB OR 1.44 MB FLOPPY DRIVE
- ✓ 200 MB IDE HARD DRIVE
- ✓ SONY CD-ROM W/375ms ACCESS TIME
- ✓ SOUND CARD W/SOFTWARE
- ✓ SET OF EXTERNAL SPEAKERS
- ✓ 4 CD'S INCLUDING: COMPTON'S MULTI-MEDIA ENCYCLOPEDIA, BRITANNICA'S FAMILY CHOICE, BRITANNICA'S HOME OFFICE SELECT AND SOFTWARE JUKE BOX
- ✓ 14" SVGA COLOR MONITOR .28mm
- ✓ SVGA 1MB ADAPTER
- ✓ SIX 16-BIT SLOTS AND ONE 8-BIT EXPANSION SLOT
- ✓ 101-KEY KEYBOARD
- ✓ MS DOS 6.0
- ✓ WINDOWS 3.1 WITH MICROSOFT COMPATIBLE MOUSE
- ✓ 2 SERIAL, 1 PARALLEL AND 1 GAME PORTS



## CHINON FLOPPY DRIVES "THE QUALITY AND PRICES BEAT TEAC!"



★★BEST PRICE ANYWHERE★★



**MICRO DISTRIBUTION CENTER**  
48879 KATO RD., FREMONT, CA 94539  
(510) 657-8079 FAX (510) 657-9511

AT, XT is a registered trademark of IBM Inc.

MICRO MARKETPLACE



# THE BEST PRICE IN TOWN!

**\$705**

## 486DX2-66MHz w/64K Cache

- 1MB Expandable to 32MB on Board
- 8K Internal Cache
- 64K External Cache Exp. to 256K
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard

### Optional for 486 Systems

**\$650**

## 486-50MHz w/64K Cache

### Intel 80486-50MHz CPU

- 1MB Expandable to 32MB on Board
- 8K Internal Cache
- 64K External Cache Exp. to 256K
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard

VESA Local Bus .....Add \$20  
Orchid VESA Local Bus Motherboard ...Add \$80

## 486-33MHz w/64K Cache

w/Intel 80486-33MHz CPU .....\$515  
w/Cyrix CPU, Math Chip .....\$365

- 1MB Expandable to 32MB on Board
- 8K Internal Cache
- 64K External Cache Exp. to 256K
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard

VESA SVGA Card w/1MB .....Add \$85  
Orchid Fahrenheit VLB w/1M .....Add \$140  
VESA IDE Card .....Add \$30

### OPTIONAL:

w/system purchase

• 14" Mono Monitor & Card .....\$100  
• Super VGA Monitor (1024x768  
0.39) w/SVGA Card 512K .....\$235

• Super VGA Monitor (1024x768  
0.28) w/SVGA Card 512K .....\$270  
• Non-Interlaced SVGA Monitor  
(1024x768 0.28) w/1M Card .....\$310

## MULTIMEDIA

### SOUND CARDS

#### Sound Blaster Pro Deluxe .....\$129

- 8 Bit Digital sampling & playback
- Includes Lemmings, Indianapolis 500, Multimedia Encyclopedia

#### Sound Blaster 16 ASP .....\$219

- 16 Bit Stereo sampling & playback
- Includes HSC InterActive, PC Animal Plus, Multimedia Encyclopedia

### CD-ROMS

#### Mitsumi MPC CD-ROM .....\$180

- AT Bus 350ms access time, 150KB transfer rate

#### SONY CDU31A .....\$175

- AT Bus 430ms access time, 150KB transfer rate

#### Texel DM-3024N .....\$345

- SCSI, 265ms access time

#### Toshiba XM-3401 .....\$395

- SCSI w/200ms, 330KB transfer rate

**NOVELL**

Sales...  
Custom Design Service...  
Installation and Maintenance...  
Extended Software Support...

Available through

**STEPFORD**  
(415) 553-3837

### CREATIVE LABS UPGRADE KITS

#### Edutainment CD 8 Bit .....\$460

- Sound Blaster Pro Deluxe
- Speakers
- Creative CD-ROM
- 8 software included

#### Edutainment CD 16 Bit .....\$510

- Sound Blaster 16
- Speakers
- CD-ROM
- 8 software included

#### Discovery CD 8 Bit .....\$385

- Sound Blaster Pro Deluxe
- Speakers
- Creative CD-ROM
- 4 software included

#### Discovery CD 16 Bit .....\$450

- Sound Blaster Pro Deluxe
- Speakers
- Creative CD-ROM
- 4 software included

**BELMONT SYSTEMS INC.**  
(Belmont Computer Products)

1555 Industrial Road, San Carlos CA 94070

**(415) 598-9058**

**FAX (415) 598-0186**

**Store Hours: M-F 9-6**

**Sat. 10-3**



# PRICE IS NOT ALL WE OFFER:

BEST QUALITY • STRONGEST SUPPORT STAFF • 6 YEARS BUSINESS EXPERIENCE

**\$300**

## 486SX-25MHz

- 1MB Expandable to 32MB on Board
- 8K Internal Cache
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard

486SX-33MHz .....\$360

**\$280**

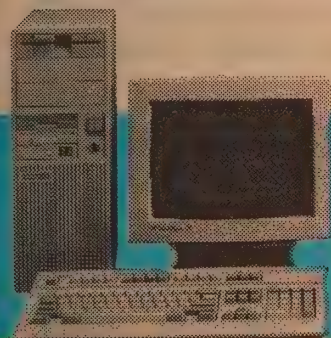
## 386-40MHz w/64K Cache

- 1MB Expandable to 32MB on Board
- 64K Static Cache Memory
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Socket for 80387
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard

**\$240**

## 386SX-33MHz

- 1MB Expandable to 8MB on Board
- Shadow RAM
- 1.2 or 1.44MB Floppy Drive
- 1:1 Interleave HD/FD Controller
- Tower or Desktop case w/power supply
- 101 Enhanced Keyboard



|                             |       |                    |       |
|-----------------------------|-------|--------------------|-------|
| • 44MB 28MS Hard Disk ..... | \$110 | • 170MB 16MS ..... | \$180 |
| • 85MB 16MS .....           | \$155 | • 212MB 16MS ..... | \$200 |
| • 125MB 16MS .....          | \$165 | • 340MB 15MS ..... | \$290 |
|                             |       | • 510MB 12MS ..... | \$495 |



### Keyboards

|                          |      |
|--------------------------|------|
| Mitsumi 101 Key .....    | \$39 |
| Keytronic 101 Key .....  | 45   |
| Maxiswitch 101 Key ..... | 45   |

### Floppy Drives

|                              |      |
|------------------------------|------|
| TEAC/Epson 1.2MB .....       | \$55 |
| TEAC/Epson 1.44MB 3.5" ..... | 55   |

### Hard Disks

|                               |       |
|-------------------------------|-------|
| Conner 3000 40MB .....        | \$140 |
| Western Digital 85MB .....    | 175   |
| Conner 85MB .....             | 175   |
| Conner 30104 120MB .....      | 190   |
| Western Digital 125MB .....   | 190   |
| Maxtor 7120A 130MB 15ms ..... | 195   |
| Conner 170MB .....            | 210   |
| Western Digital 210MB .....   | 225   |
| Maxtor 210MB .....            | 235   |
| Maxtor 340MB .....            | 310   |
| Western Digital 340MB .....   | 310   |
| Conner 3504 510MB 12ms .....  | 525   |
| Fujitsu 512MB 12ms .....      | 575   |
| Maxtor 1.2GB SCSI .....       | 925   |
| Fujitsu 1.2GB SCSI .....      | 925   |

### Modems

|                                        |      |
|----------------------------------------|------|
| 2400 Baud (Int) .....                  | \$30 |
| 2400 Baud (Ext) .....                  | 65   |
| Fax Modem (9600 Fax, 2400 Modem) ..... | 50   |
| 14,400 Modem, 14,400 Fax .....         | 140  |

### Interface Cards

|                                                |      |
|------------------------------------------------|------|
| Mono Graphic Card .....                        | \$20 |
| VGA Card (16 Bit 800x600) .....                | 30   |
| OAK SVGA (1024x768 512K) .....                 | 40   |
| Trident VGA w/1M RAM .....                     | 55   |
| Orchid Fahrenheit (1280x1024) w/1MB VRAM ..... | 150  |
| Orchid Fahrenheit VLB w/1MB .....              | 150  |
| Diamond Stealth VLB w/1MB .....                | 150  |
| ATI Ultra Pro w/2MB VRAM VLB .....             | 330  |
| Orchid P9000 VLB w/3MB .....                   | 375  |
| Diamond Viper w/2MB .....                      | 375  |
| AT M I/O (2S,1P,1G) .....                      | 25   |
| IDE Card w/cable .....                         | 25   |
| Promise IDE VESA Cache Controller .....        | 170  |
| Adaptec SCSI 1542C w/Kit .....                 | 265  |
| Adaptec 1742 EISA SCSI .....                   | 375  |

### Monitors

|                                     |              |
|-------------------------------------|--------------|
| 14" Flat Screen .....               | \$95         |
| Super VGA (1024x768) .39 .....      | 205          |
| Super VGA (1024x768) .28 .....      | 245          |
| Non-Interlaced SVGA Monitor .....   | 260          |
| Sony 1304S/1430 .....               | 535/575      |
| Sony 1604/1730 .....                | 920/975      |
| Viewsonic 6 .....                   | 295          |
| Viewsonic 6FS .....                 | 515          |
| Viewsonic 7 .....                   | 870          |
| Viewsonic 15 .....                  | 475          |
| Viewsonic 17 .....                  | 1040         |
| Viewsonic 8 .....                   | 1510         |
| Nanao F550i 17" 1280x1024 .28 ..... | 1050         |
| NEC 3FGE/4FGE/5FGE .....            | 590/690/1090 |

### Motherboards

|                             |       |
|-----------------------------|-------|
| 386SX-33MHz .....           | \$115 |
| 386-40MHz 64K Cache .....   | 165   |
| 486SX-25MHz .....           | 195   |
| 486-33MHz w/64K Cache ..... | 395   |
| 486-50MHz w/64K Cache ..... | 535   |

### Printers

|                                   |           |
|-----------------------------------|-----------|
| Panasonic KX-P 1123 w/cable ..... | NEW \$195 |
| Panasonic KX-P 1624 w/Cable ..... | 345       |
| Panasonic 1124i w/Cable .....     | 285       |

### Miscellaneous

|                                                |          |
|------------------------------------------------|----------|
| 387SX .....                                    | \$60     |
| 387-25/33/40 .....                             | 65/75/85 |
| 150W (XT) Power Supply .....                   | 40       |
| 230W Power Supply .....                        | 48       |
| Logitech Mouse Man .....                       | 65       |
| Logi Trackman .....                            | 75       |
| Microsoft Serial/Bus Mouse (New Version) ..... | 85       |
| DFI Mouse (3 Button, Microsoft Comp.) .....    | 15       |
| Mini Vertical Case w/PS .....                  | 55       |
| Mid Mini Vertical Case w/PS .....              | 85       |
| Full Vertical Case w/PS .....                  | 110      |
| Colorado 120MB Tape Backup .....               | 150      |
| Colorado 250MB Tape Backup .....               | 165      |
| 16 Bit Ethernet Card .....                     | 69       |
| WD SMC Elite Ethernet 16 Bit .....             | 135      |
| RAM DIP / SIPP/ SIMM .....                     | Call     |

### TERMS & CONDITIONS:

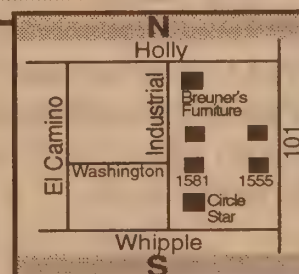
- Company, Government PO's Welcome
- UPS Shipping Daily

All Prices and contents subject to change w/o notice.  
All brand names are registered trademarks.  
Co. Term on credit approval.

Welcome to visit  
our showroom!  
Computers, Monitors and  
printers are now  
on display!

Prices Reflect Cash Discount

Located in the  
San Carlos Commerce  
Center Office Park







# MYLEX AiM FOR THE BEST!

MICRONICS  
CONCEPTS INC.

Lifetime Labor and 1 Year Parts Warranty \*\*

We Do Custom Systems Configuration & Upgrade



## Intel® 486-25/33/50/66 32-Bit PCI Local Bus

- \* Intel 486-25SX/33SX/33DX/50DX/66DX2 MHz
- \* 32-Bit PCI & ISA Architecture MotherBoard w/ 256KB Cache
- \* 4MB DRAM Simm 70ns 72 pin (up to 128MB)
- \* Maxtor 345MB 13ms SCSI Hard Drive
- \* PCI Local Bus Graphic Card S3 w/1MB 1280x1024 Max. Resolution
- \* 16.8 Million Max. Color Display
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* KeyTronic 101+ Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* On Board PCI SCSI II Controller NCR Chip
- \* On Board 2HD IDE Controller
- \* On Board 2FD (Support 2.88MB) Controller
- \* 2 Serials, 1 Parallel, & 1 Game Ports
- \* Tower Case w/ 230 Watts Power Supply, LED
- \* Dual Cooling Fans for 50MHz & 66MHz

Pentium Overdrive Upgradeable

\$ 1649 / 1729 / 1849 / 1999 / 2079

DX25 / DX33 / DX50 / DX66 / DX66-44

(Monitor not included)

## ORCHID 486-25/33/50/66 32-Bit VESA Local Bus

- \* Intel 486-25SX/33SX/33DX/50DX/66DX2 MHz
- \* ORCHID NEW Superboard w/256KB Cache Support Bus Mastering
- \* 4MB DRAM Simm 70ns (up to 32MB)
- \* 340MB 13ms IDE Hard Drive
- \* ORCHID Fahrenheit VLB w/1MB 1280x1024 Max. Resolution
- \* 16.8 Million Max. Color Display
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* KeyTronic 101+ Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* ORCHID VESA Local Bus IDE Controller
- \* 32-Bit 2HD/2FD VESA Local Bus
- \* Max. 8 MB/s data transfer rate
- \* 2 Serials, 1 Parallel, & 1 Game Ports
- \* Tower Case w/ 230 Watts Power Supply, LED
- \* Dual Cooling Fans for 50MHz & 66MHz

\$ 1199 / 1279 / 1399 / 1589 / 1639

DX25 / DX33 / DX50 / DX66 / DX66-44

(Monitor not included)

## AiM 486-25/33/50/66 MHz 32-Bit VESA Local Bus

- \* Intel 486-25SX/33SX/33DX/50DX/66DX2 MHz
- \* 128KB Cache Memory (up to 256 KB)
- \* 4MB DRAM Simm 70ns (up to 32MB)
- \* 213MB 15ms IDE Hard Drive
- \* 14" SVGA Non-Interlace 1024x768 0.28dp SVGA monitor
- \* ORCHID Fahrenheit VLB W/1MB 1280x1024 & 16.8 Million Color
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* 101 Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* VESA Local Bus 2HD/2FD IDE Controller w/ 2 Serials, 1 Parallel, & 1 Game Ports
- \* Tower Case w/230 Watts Power Supply, LED
- \* Dual Cooling Fans for 50MHz & 66MHz

Pentium Overdrive Upgradeable

\$ 1259 / 1349 / 1459 / 1599 / 1679

DX25 / DX33 / DX50 / DX66 / DX66-44

## Intel® 486-33/50/66 EISA 32-Bit EISA VESA Local

- \* Intel 486-33DX / 50DX / 66DX2
- \* AIR EISA VESA Local Bus w/256KB Cache
- \* 3 VLB Slot Support Bus Mastering
- \* 8MB DRAM 72 pin Simm 70ns (up to 128MB)
- \* Diaond Stealth VLB 24 w/ 1MB S3 Chip 32-Bit VESA Local Bus
- \* 1280x1024 & 16.8 Million Color
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* KeyTronic 101+ Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* Maxtor 345MB 15ms SCSI Hard Drive
- \* UltraStor 34F VESA Local Bus SCSI II Bus Mastering Controller
- \* Full Tower Case w/250 Watts Power Supply, LED
- \* Dual Cooling Fans for 50MHz & 66MHz

Pentium Overdrive Upgradeable

\$ 2059 / 2199 / 2299

DX33 / DX50 / DX66

(Monitor not included)

## IBM 486 SLC2 50/66 32-Bit VESA Local Bus 64KB Cache 130MB HD

- \* IBM 486SLC2 50/66 MHz
- \* ALARIS 486SLC2 VLB Motherboard w/64KB Cache Memory (up to 128 KB) & Math. (floating point) Coprocessor
- \* Manufactured by IBM in the USA
- \* 4MB DRAM Simm 70ns (up to 16MB)
- \* 130MB 15ms IDE Hard Drive
- \* 14" 1024x768 0.28dp SVGA Non-interlace Color monitor
- \* Genoa 8500VL VLB 1024X786 Graphic Card w/1MB & 16M Color
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* 101 Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* 2HD/2FD VLB IDE Controller
- \* w/2 Serials, 1 Parallel, 1 Game Ports
- \* Mini Tower Case w/230 Watts Power Supply

\$ 1289 / 1349

SLC2 50 / SLC2 66

## 486-25 / 33 / 50 / 66 ISA 128KB Cache 130MB

- \* Intel 486-25SX/33SX/33DX/50DX/66DX2
- \* ISA Motherboard 128KB Cache Memory (up to 256 KB)
- \* 4MB DRAM Simm 70ns (up to 32MB)
- \* 130MB 15ms IDE Hard Drive
- \* 14" 1024x768 0.28dp SVGA monitor
- \* Trident 8900CL SVGA 1024X786 Graphic Card w/1MB
- \* TEAC 1.2MB Floppy Drive
- \* TEAC 1.44MB Floppy Drive
- \* 101 Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* 2HD/2FD IDE Controller
- \* w/2 Serials, 1 Parallel, 1 Game Ports
- \* Tower Case w/230 Watts Power Supply
- \* Dual Cooling Fans for 50MHz & 66MHz

\$ 1049 / 1129 / 1249 / 1399 / 1479

DX25 / DX33 / DX50 / DX66 / DX66-44

## 386-33SX/33DX/40DX SVGA 85MB HD

- \* 386-33SX/33DX/40DX
- \* 128KB Cache Memory (For 33DX/40DX only)
- \* 4MB Simm 70ns (For 33DX/40DX only)
- \* OR 2MB Simm 70ns (For 25SX/25DX)
- \* 130 MB IDE Hard Drive
- \* 14" 1024x768 0.39dp SVGA Color Monitor
- \* Trident 9000 1024x768 w/512KB SVGA
- \* 1.2MB OR 1.44MB Floppy Drive
- \* 101 Enhanced Keyboard
- \* Microsoft Compatible Mouse w/ Pad
- \* 2HD/2FD IDE Controller
- \* w/2 Serials, 1 Parallel, & 1 Game Port
- \* Mini Tower Case w/ 230 Watts Power Supply

\$ 749 / 879 / 879

DX33 / DX33 / DX40

## Miscellaneous

- Motherboards (386, 486, EISA, Local Bus) Call
- CPUs (Intel/AMD/Cyrix 386, 486) Call
- Math Coprocessor 387/487 (Intel/AMD/ULSI/Cyrix ...) Call
- SIMM Memory Chips (256KB, 1MB, 4MB, 16MB) Call
- SIPP, DIP Memory Chips (256KB, 1MB, 4MB, 16MB) Call
- Hard Drives (IDE, SCSI): Quantum, Conner, Maxtor, Seagate, Western Digital, Teac, Toshiba, Fujitsu, .... Call
- VESA IDE I/O 32-Bit Controller 2HD, 2FD, 2S, 1P, 1G \$55
- Logitech Serial/Bus MouseMan & TrackMan 2 \$49\*/\$65/\$75
- Logitech MouseMan Cordless \$95
- Logitech Scanman 256 w/OCR 400DPI \$279
- Microsoft serial mouse \$49\*/\$69
- KeyTronic 101+ enhanced Keyboard \$38
- Maxiswitch 124 Programmable keyboard \$69
- Northgate Omni 101/102 enhanced keyboard \$75
- Northgate Omni Ultra 118 key enhanced keyboard \$95
- DSI 14.4K/14.4K FaxModem WinFax+DosFaxInt/Ext \$155/179
- Zoltrix 2.4/9.6K Fax Modem w/MNP5, BitFax for Win \$49
- TEAC 1.2MB/1.44MB Floppy Drive \$54/47
- TEAC Combo Floppy Drive \$119
- PRINTERS (Apple, HP, Panasonic, Citizen, Epson, QMS, ....) Call
- Printer Memory Upgrade (HP, Panasonic, ....) Call
- Creative Labs Discovery CD Upgrade Kit (8-Bit/16-Bit) \$389/449
- Edutainment CD Upgrade Kit (8-Bit/16-Bit) \$469/519
- SoundBlaster ASP 16/SoundBlaster Pro Deluxe \$205/125
- Video Blaster \$339
- Media Vision FUSION CD 16 Multimedia (Int/Ext) \$479/\$509
- Pro 16 Multimedia System \$879
- Pro Audio Spectrum 16 / Pro Audio Studio 16 \$159/209
- Logitech Soundman 16 \$159
- Mitsumi Internal CD-ROM w/16-Bit Controller 350ms \$179
- NEC CDR 84-1 Internal CD-ROM SCSI II 280ms 300K \$469
- Sony Internal 31A CD-ROM w/Controller Caddyless \$199
- TEAC CD-50 Internal CD-ROM 265ms 335KB \$399
- Texel 3024 Internal CD-ROM SCSI II 265ms 300KB \$379
- Toshiba 3401 Internal CD-ROM SCSI II 200ms 330KB \$399
- Coloroda Tape Backup 120MB/250MB \$145/185
- Coloroda Trakker External Tape Backup 120/250MB \$310/365
- 3M 2120 120MB/250MB Tape \$17
- UltraStor 34F VLB Controller (SCSIBusMastering) \$279
- Promise VLB IDE Cache Controller 4030 \$155
- Wonder System IDE 4HD/2HD Controller \$25
- SCSI IDE 4FD CDROM Controller \$89
- VLB IDE 2HD/2FD 2S 1P Controller \$59
- IDE 4HD/4FD COEXIST SCSI MFM RLL ESDI \$59

## Monitors

- 14" SVGA Color Monitor 1024 .28 \$259
- 14" SVGA Color Monitor 1024 .28 NI 60Hz \$285
- 14" SVGA Color Monitor 1024 .28 NI 72Hz \$309
- Samsung 15" SyncM. 15C .28 1024 NI 72Hz \$449
- Samsung 17" SyncM. 4+ .31 1280 NI 72Hz \$799
- Samsung 17" SyncM. 5C .26 1280 NI 72Hz \$899
- ViewSonic 4E/6E(NI) 1024 .28 \$275/315
- ViewSonic 5+ 1024x768 .25 NI 70Hz \$479
- ViewSonic 15 15" .28 70Hz Flat \$535
- ViewSonic 7/17 17" .28 NI 72Hz \$899/1089
- ViewSonic 20 20" .31 NI 72Hz \$1890
- SONY 14" 1430/17" 1730 .25 72Hz \$589/1049
- SONY 20" 2036/2038 .30 80Hz \$1999/2249
- NEC 15" 3FGc/4FGc 1024 \$609/3709
- NEC 17" 5FGc/21" 6FG \$1189/\$2495
- MAG 15" 15F/17" 17 1280x1024 .28 \$555/\$1019
- Nanao 15" Flat 1014 .28 \$735

..... And Much More .....

## Graphic Cards

- Trident 9000 1024x768 w/512KB \$45
- Trident 8900C 1024x768 w/1MB \$65
- REALTEK 1024x768 w/1MB & Hi Color \$65
- Paradise Graphic Accelerator w/1MB & Hi-Color \$139
- Orchid Fahrenheit VESA VLB w/1MB \$149
- Orchid Fahrenheit VESA VLB w/VA 1MB \$189
- Orchid Fahrenheit Plus w/1MB & Hi-Color \$149
- Orchid P9000 VLB w/3MB & True-Color \$369
- Orchid Celsius VLB w/2MB & True Color \$319
- Diamond 24X w/1MB & True-Color \$179
- Diamond Stealth 24VLB w/1MB True-Color \$159
- Diamond Stealth Pro VLB w/1MB VRAM \$249
- Diamond Viper VLB w/2MB & True-Color \$389
- ATI Ultra Graphic Pro w/2MB VRAM VLB \$389
- Genoa 8500VL 24-Bit Accelerator \$109
- ATI Ultra Graphic Pro w/2MB (MCA,EISA) \$489
- ATI Ultra Graphic Pro w/2MB VRAM ISA \$479
- SummaSketch III 12x124 or 16 Buttons \$309

..... And Much More .....

## Softwares

- Microsoft DOS 6.0 Upgrade (NEW) \$48
- Microsoft DOS 6.0 Full Version \$42\*
- IBM OS/2 Version 2.1 (NEW) \$99
- Microsoft Windows 3.1 \$35\*
- Microsoft Access for Windows \$88
- Microsoft Excel 4.0 for Windows \$125
- Microsoft Entertainment Pack 1-3 \$30@
- Microsoft Flight Simulator 4.0 \$38
- Microsoft Word 2.0 for Windows \$125
- After Dark for Windows \$27
- Lotus Improv for Windows \$99
- WordPerfect for Windows 5.2 (NEW!) \$115
- BitFax for Windows w/OCR & BitCom \$69
- CD-ROM Software Package (5 CDs) \$89
- FrameMaker 3.0 for Windows \$309
- Norton Utilities 7.0 (NEW!) \$109
- QEMM 386 7.0 \$59

..... And Much More .....

# AiM Computers

1741-C Clayton Road, Concord, CA 94520

TEL: (510) 687-2822

FAX: (510) 687-5276

Hours: M-F 10-6:30  
Sat 10-5:00

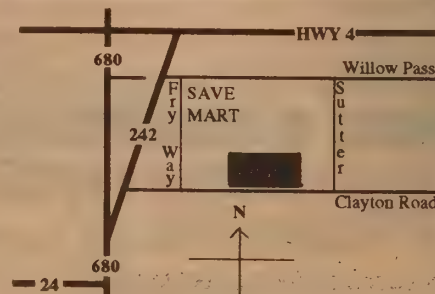


## AiM Quality Guarantee

- \* Lifetime Labor & 1 Year Parts
- \* 72 Hours Burn-In

Prices subject to change without notice  
Not responsible for typographical errors  
Trademarks are registered by the respective companies  
Contents subject to change without notice  
\*\* Limited warranty, see store for detail  
\* w/ System purchase

Extended Warranty Service Available  
On-Site Service Repair Available  
Delivery & Setup Available  
Financing & Leasing Available





# COMPUTER EXPRESS TECH

WE WILL BEAT ANY SYSTEMS ADVERTISED PRICE!  
ONE YEAR WARRANTY PARTS & LABOR FOR SYSTEMS

2725 ELCAMINO REAL SUITE #104

SANTA CLARA, CA 95051

TEL (408) 247-1996 FAX (408) 247-1184

BUSINESS HRS: MON-FRI 9:30AM-6:00PM

SAT & SUN 11:30AM-4:00PM

\*\*\*\*\*OPEN 7 DAYS A WEEK\*\*\*\*\*

| BASIC SYSTEM INCLUDES:                                                                                                |     | SUPER BASIC INCLUDES:                                                                    |            | SUPER BASIC +<br>OPTION A                                                                                      | SUPER BASIC +<br>OPTION B                                                                                      | SUPER BASIC +<br>OPTION C                                                                                        | SUPER BASIC +<br>OPTION D                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| MB w/Internal Clock Calendar<br>CPU,Mini or At Case w/230W<br>IDE:2Fd/2Hd w/1P,2S,1Game<br>1.2or1.44 Fd,101KB&1Mb Ram |     | Basic Config.+Total 4Mb Ram<br>Total 1.2&1.44 Fd +Mouse&Pad<br>and Your Option A,B,C orD |            | Basic Conf.+Total<br>4Mb Ram,+1.2 Fd<br>&,1.44, Monitor:<br>SVGA14 "IN,<br>(1024x768),Video<br>T512k, Hd 120Mb | Basic Conf.+Total<br>4Mb Ram&1.2+<br>1.44Fd,.28 Dp,NI<br>14"(1024X768)<br>SVGA, Trident 1Mb<br>170Mb Conner Hd | Basic Con+4Mb Ram<br>1.2&1.4Fd,.28Dp<br>V6E (1024X768) NI<br>Video:Luminar 1Mb<br>16 Million Colors<br>250 Mb Hd | Basic System Conf.<br>+ Total 8 Mb Ram+<br>Total 1.2&1.4Fd<br>Video not included<br>Monitor:15"Mag or<br>V15(1280x768),.28D<br>340 Mb Hd |
| SYSTEM                                                                                                                |     | MB&CPU                                                                                   | BASIC SYS. |                                                                                                                |                                                                                                                |                                                                                                                  |                                                                                                                                          |
| 386DX-40/128K                                                                                                         | ISA | \$ 119                                                                                   | \$ 253     | \$ 832                                                                                                         | \$ 889                                                                                                         | \$ 949                                                                                                           | \$ 1297                                                                                                                                  |
| 486DX-33/128K                                                                                                         | ISA | \$ 355                                                                                   | \$ 495     | \$ 1074                                                                                                        | \$ 1122                                                                                                        | \$ 1191                                                                                                          | \$ 1541                                                                                                                                  |
| 486DX-50/128K                                                                                                         | ISA | \$ 485                                                                                   | \$ 635     | \$ 1214                                                                                                        | \$ 1262                                                                                                        | \$ 1330                                                                                                          | \$ 1681                                                                                                                                  |
| 486DX2-50/128K                                                                                                        | ISA | \$ 406                                                                                   | \$ 549     | \$ 1132                                                                                                        | \$ 1176                                                                                                        | \$ 1245                                                                                                          | \$ 1594                                                                                                                                  |
| 486DX2-66/128K                                                                                                        | ISA | \$ 555                                                                                   | \$ 693     | \$ 1269                                                                                                        | \$ 1319                                                                                                        | \$ 1385                                                                                                          | \$ 1737                                                                                                                                  |
| 486DX-40/256K                                                                                                         | ISA | \$ 405                                                                                   | \$ 592     | \$ 1129                                                                                                        | \$ 1165                                                                                                        | \$ 1332                                                                                                          | \$ 1574                                                                                                                                  |
| 486DX-33/128K                                                                                                         | VLB | \$ 373                                                                                   | \$ 509     | \$ 1100                                                                                                        | \$ 1155                                                                                                        | \$ 1211                                                                                                          | \$ 1559                                                                                                                                  |
| 486DX-50/128K                                                                                                         | VLB | \$ 515                                                                                   | \$ 649     | \$ 1236                                                                                                        | \$ 1295                                                                                                        | \$ 1349                                                                                                          | \$ 1699                                                                                                                                  |
| 486DX2-50/128K                                                                                                        | VLB | \$ 424                                                                                   | \$ 561     | \$ 1153                                                                                                        | \$ 1202                                                                                                        | \$ 1264                                                                                                          | \$ 1614                                                                                                                                  |
| 486DX2-66/128K                                                                                                        | VLB | \$ 579                                                                                   | \$ 709     | \$ 1296                                                                                                        | \$ 1349                                                                                                        | \$ 1403                                                                                                          | \$ 1756                                                                                                                                  |
| 486DX-33/256K ORCHID                                                                                                  | VLB | \$ 412                                                                                   | \$ 563     | \$ 1139                                                                                                        | \$ 1184                                                                                                        | \$ 1252                                                                                                          | \$ 1604                                                                                                                                  |
| 486DX-50/256K ORCHID                                                                                                  | VLB | \$ 554                                                                                   | \$ 703     | \$ 1278                                                                                                        | \$ 1322                                                                                                        | \$ 1396                                                                                                          | \$ 1744                                                                                                                                  |
| 486DX2-66/256K ORCHID                                                                                                 | VLB | \$ 616                                                                                   | \$ 754     | \$ 1329                                                                                                        | \$ 1379                                                                                                        | \$ 1449                                                                                                          | \$ 1799                                                                                                                                  |
| 486DX-33/256K EISA/VLB(NICE)                                                                                          |     | \$ 499                                                                                   | \$ 645     | \$ 1224                                                                                                        | \$ 1269                                                                                                        | \$ 1339                                                                                                          | \$ 1690                                                                                                                                  |
| 486DX-50/256K EISA/VLB(NICE)                                                                                          |     | \$ 637                                                                                   | \$ 784     | \$ 1363                                                                                                        | \$ 1409                                                                                                        | \$ 1479                                                                                                          | \$ 1829                                                                                                                                  |
| 486DX2-66/256KEISA/VLB(NICE)                                                                                          |     | \$ 698                                                                                   | \$ 839     | \$ 1418                                                                                                        | \$ 1463                                                                                                        | \$ 1532                                                                                                          | \$ 1886                                                                                                                                  |

## HARD DRIVES

120MB(IDE)CONNER.....\$159  
130MB(IDE)MAXTOR.....\$179  
170MB(IDE)CONNER.....\$173  
210MB(IDE)MAXTOR.....\$219  
250MB(IDE)CONNER.....\$220  
340MB(IDE)MAXTOR.....\$309  
540MB(IDE)MAXTOR.....\$680  
520MB(SCSI-FUJ.).....\$725  
120MB(DJ-10)COLORADO.....\$145  
250MB(DJ-20)COLORADO.....\$179  
1.2GB MAXTOR(SCSI).....\$975

## CONTROLLER CARD

IDE:2FD,2HD:1P,2S,1G.....\$16  
I/O W/1P,2S,1G.....\$12  
PARALLEL CARD.....\$12  
IDE VLB/ORCHID VLB.\$39/56  
**PROMISE**  
DC 200 IDE (UP TO 16MB).....\$115  
DC 2040 SCSI UP TO 16MB.....\$209  
DC 4030 VLB UP TO 16MB.....\$165  
**ULTRASTOR**  
UL14F ISA/SCSI32k Cache.....\$215  
UL24F SCSI/ESIA64k Cache\$360  
UL34F SCSI/VLB32k Cache\$280

## ADAPTEC

1552M ISA/SCSI W/IO.....\$85  
1542C SCSI/ISA/+KIT.\$200/249  
1742A SCSI/EISA/+KIT.\$350/415

## FLOPPY DRIVES

1.2 TEAC.....\$46  
1.44 TEAC.....\$39  
1.2/1.44DUAL.....\$129  
MOUNTING KIT.....\$5

## MONITORS

### VIEWSONIC

V6E:14".28dp NI.....\$289  
V4E:14".28dp IN.....\$270  
V5+/V5E:NI,14",.....\$460/360  
V15/V17/V20.....\$465/1070/1700

### SONY

CPD-1430S 14".25dp.....\$585  
CPD-1730 17".25dp.....\$995  
GDM-2036S 20".30dp.....\$1969  
GDM-2038 20".30dp.....\$2249

### NEC

3FGE 15".28dp.....\$584  
4FGE 15".28dp.....\$684  
5FGE 17".28dp.....\$1090

### NANAO

F340IW 15".28dp.....\$665  
F550I 17".28dp(1280x1024).....\$1015  
F550IW 17".28dp(27-65khz)\$1080  
T560I 17".26dp(30-78khz).....\$1670  
F750I 21".31dp(1600x1280).....\$1933  
F760IW 21".31dp(27-78khz),(1280x1024).....\$2048

### MAG InnoVision

LX1564 15".28dp (1280x768).....\$449  
LX15F 15".28dp (1280X768).....\$465  
LX17 F 17".26dp (1280x1024).....\$960

### HITACHI American Limited

CM2095 20".31Dp(NI).....\$1295  
CM2087 20".31Dp(NI).....\$1585

### SAMSUNG(OEM)

14" SVGA 1024X768.(IN).....\$245  
14" SVGA 1024X768.(NI).....\$265

## GRAPHIC CARD

TRIDENT 512K/1MB.....\$32/59  
24 BITS LUMINAR 1MB.....\$80  
GENOA VLB 1MB.....\$105  
SPIDER VLB 1MB/2MB.\$94/143  
SPIDER + 1MB/2MB.....\$109/165  
BLACK WIDOW 1/2MB\$199/260

### ORCHID

PRO DESIGNER IIS 1MB.....\$125  
FARENHEIT 1280(ISA)1MB\$135  
FARENHEIT VLB 1MB.....\$146  
FARENHEIT VA 1MB.....\$189  
P9000 VLB.....\$339

### DIAMOND

SPEEDSTAR PRO 1MB.....\$118  
STEALTH 24 ISA/VLB.\$155/165  
STEALTH PRO VLB 2MB...\$299  
VIPER VLB 2MB.....\$377

## KEYBOARDS

101 ENHANCED KB.....\$19  
MAXISWITCH KB.....\$29  
KEYTRONIC KB.....\$32  
FOCUS 2001/9000.....\$39/62  
OMNI 101/102 KB.....\$69  
OMNI ULTRA KB.....\$89

## MISCELLANEOUS

2400 MODEM.(ZOLTRIX).....\$26  
9600/2400 (FAX/MODEM).....\$46  
14.4/14.4 (FAX/MODEM).....\$139  
14.4/14.4 (US ROBOTICS).....\$169  
14.4/14.4(GVC)W/WINFAX..\$149

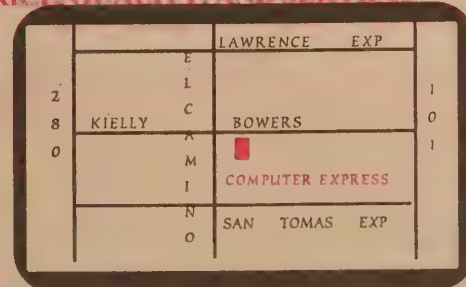
## CASE

MINI/MED/W/LED&230W..\$55/86  
TOWERW/LED&230.....\$98  
230 WATTS POWER SUPPLY..\$30

## MOUSE

MICROSOFT MOUSE COMP....\$12  
MICROSOFT MOUSE .....\$78  
MICROSOFT OEM.....\$45  
LOGITECH SERIAL/BUS.....\$62/65  
LOGITECH OEM.....\$40  
FIRST MOUSE.....\$39  
COOLING FAN.....\$15  
MITSUMI CDROM(350MS).....\$175  
NEC CD ROM 84M(280MS).....\$418  
TOSHIBA CD 3401(200MS).....\$395  
PRO AUDIO STUDIO.....\$182  
SPECTRUM PRO 16.(OEM).....\$129

COME & JOIN US-WE OFFER THE BEST  
PRICE,QUALITY,AND SERVICE



PURCHASE ORDERS ARE WELCOMED&SUBJECT TO  
APPROVAL. PRICE & AVAILABILITY SUBJECT TO  
CHANGE W/O NOTICE. NOT RESPONSIBLE FOR TYPOS.  
SHIPPING, INSURANCE & COD CHARGES ARE EXTRA



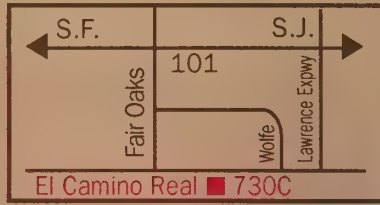
**SCHWAB SYSTEMS**

SINCE 1987

# SCHWAB COMPUTER

730 EAST EL CAMINO REAL, SUITE C • SUNNYVALE, CA. 94087 • HOURS: M-F 9-6 SAT 11-4

**YOU GET WHAT YOU NEED:  
THE BEST VALUE FOR YOUR MONEY!**  
**TEL: (408) 245-6666 • FAX: (408) 245-3103**



## SC486DX VLB SUPER SYSTEM

- INTEL 486DX-33 MHz CPU
- 256K CACHE
- US MADE VLB SUPER BOARD
- 4 MB RAM
- 1.2 MB OR 1.44 MB FLOPPY DRIVE
- 101 KEYBOARD AND I/O CARD
- 213 MB HARD DISK
- VLB VIDEO ACCELERATOR
- IDE CONTROLLER
- 14" SVGA MONITOR .28MM
- MINI TOWER CASE W/230W POWER SUPPLY

**\$1288**

## SC386DX-33/40 ISA SYSTEM

- INTEL/AMD CPU
- 128K CACHE
- 4 MB RAM
- 130 MB HARD DISK
- IDE CONTROLLER
- 1.2 MB OR 1.44 MB FLOPPY DRIVE
- 101 KEYBOARD AND I/O CARD
- SVGA ADAPTER WITH 512K
- 14" SVGA MONITOR 0.28MM
- MINI-TOWER CASE W/230W POWER SUPPLY

**\$888**

### MOTHERBOARDS

|                             |       |
|-----------------------------|-------|
| 486 VLB 33/66 256KC w/o CPU | \$130 |
| 486 ISA 33/50 128KC w/o CPU | 99    |
| 386 DX 33/40 128KC w/CPU    | 119   |
| 486 SX 25 w/CPU 128KC       | 189   |
| 386SX 33 w/CPU              | 89    |

### HARD DRIVES

|             |       |
|-------------|-------|
| 130 MB IDE  | \$189 |
| 213 MB IDE  | 229   |
| 245 MB ID   | 269   |
| 340 MB IDE  | 339   |
| 520 MB IDE  | 759   |
| 1.2 GB SCSI | 1099  |

### MONITORS

|                     |      |
|---------------------|------|
| 12/14" Mono         | \$95 |
| 14" SVGA 0.28mm     | 255  |
| 14" SVGA NI 0.28mm  | 299  |
| 15" 1280 NI         | 399  |
| 17" 1280 NI         | 699  |
| 20" HITACHI 1280 NI | 1399 |

### VIDEO ADAPTERS

|                   |      |
|-------------------|------|
| SVGA w/512K       | \$38 |
| SVGA w/ 1 MB      | 56   |
| Orchid F1280 VLB  | 169  |
| Stealth 24 VLB    | 169  |
| ATI Ultra Pro VLB | 349  |

### FLOPPY & TAPE BACK-UP

|                    |      |
|--------------------|------|
| 1.2 MB 5.25"       | \$49 |
| 1.44 MB 5.25"      | 48   |
| Teac 1.2 & 1.44 MB | 149  |
| Colorado 120 MB TB | 145  |
| Colorado 250 MB TB | 199  |

### DISK CONTROLLERS

|                   |      |
|-------------------|------|
| IDE Controller    | \$15 |
| IDE + I/O         | 22   |
| IDE VLB + I/O     | 55   |
| Orchid IDE VLB    | 75   |
| Adaptec 1542C Kit | 245  |
| Adaptec 1742C Kit | 419  |
| Ultrastor 34F-VLB | 299  |

### KEYBOARDS

|                |      |
|----------------|------|
| Mitsumi 101    | \$25 |
| Lite-On 101    | 26   |
| Keytronic 101  | 36   |
| MaxiSwitch 101 | 38   |
| Click 101      | 23   |
| Omni 101       | 75   |

### CASES

|                     |      |
|---------------------|------|
| Mini Tower w/230W   | \$55 |
| Mini Desktop w/200W | 57   |
| Mid Tower w/250W    | 79   |
| Full Tower w/250W   | 109  |
| Full Tower w/300W   | 149  |

### MODEMS

|                               |      |
|-------------------------------|------|
| 2400 Internal/External        | \$36 |
| 24/96 Fax Internal            | 55   |
| 14.4/14.4 Fax Internal        | 179  |
| 14.4/14.4 Fax External        | 220  |
| All w/Software For DOS & WIN. |      |

### NETWORKING

|                        |      |
|------------------------|------|
| NE 1000 Comp 8 Bit     | \$49 |
| NE 2000 Comp. 16 Bit   | 59   |
| SMC Elite 16 Bit       | 129  |
| 3COM                   | CALL |
| LANTastic AE-2 Starter | 490  |
| LANTastic AE-2 Adapter | 190  |

### CD-ROMS & SOUND

|                    |       |
|--------------------|-------|
| Mitsumi Int w/Card | \$199 |
| (Photo CD Ready)   |       |
| Sony CD-31 Int     | 199   |
| Toshiba 3401B Int  | 429   |
| Toshiba 3401B Ext  | 529   |
| Spectrum 16        | 159   |

### PRINTERS

|                     |       |
|---------------------|-------|
| Panasonic 2123      | \$229 |
| Panasonic 2180      | 169   |
| Panasonic 2624      | 339   |
| HP DeskJet 500C     | 499   |
| HP 4L Laser Printer | CALL  |
| OKI Laser 400       | CALL  |

### MOUSE & DIGITIZERS

|                       |      |
|-----------------------|------|
| Serial Mouse          | \$15 |
| Logitech 3 Button     | 35   |
| Microsoft Serial      | 49   |
| Microsoft Bus         | 69   |
| Logitech Trackball    | 79   |
| Summasketch III 12x12 | 329  |
| Calcomp               | CALL |
| Kurta                 | CALL |

### SCANNERS & ETC.

|                          |       |
|--------------------------|-------|
| Complete PC GS Full Page | \$395 |
| ScanPlus Color Page      | 595   |

**CALL FOR OTHER  
PRODUCTS NOT  
LISTED**

### SOFTWARE

|             |      |
|-------------|------|
| DOS 6.0     | \$45 |
| Windows 3.1 | 49   |
| MS-Word     | 249  |
| MS-Excel    | 249  |
| MS-Office   | 449  |

### MEMORY CHIPS

|          |        |
|----------|--------|
| 1x9-70ns | \$CALL |
| 4x9-70ns | CALL   |
| 387SX-33 | CALL   |
| 387DX-33 | CALL   |
| 486DX-33 | CALL   |
| 486DX-66 | CALL   |

■ WE OFFER LIFETIME FREE TECHNICAL SUPPORT WITH EVERY SCHWAB SYSTEM SOLD PLUS ONE YEAR PARTS AND LABOR WARRANTY.  
■ PRICES AND AVAILABILITY AND SPECIFICATIONS ARE SUBJECT TO CHANGE W/O NOTICE ■ NOT RESPONSIBLE FOR TYPOGRAPHIC ERRORS ■ GOVERNMENT, UNIVERSITY AND QUALIFIED FIRMS PO ACCEPTED



# YOUR ONE STOP SHOP IN SOUTH SAN FRANCISCO

*With Quality Systems, Great Prices! and a knowledgeable Staff, Comet Micro Systems is the One!*

*Voted one of the Best Ten  
Computer stores in the Bay  
Area!*

## SPECIALS OF THE MONTH

### AMI Super Voyager 486DX2

66MHz VESA Local Bus System

Intel 486DX2-66MHz, 256K RAM Cache

Full Size Tower with 250W Power Supply

AMI Super Voyager VLB System Board

8MB RAM 70ns Installed, Exp. to 256MB on Board

Teac 1.2MB and 1.44MB Floppy Drive

Quantum LPS240AT 244MB IDE Hard Disk

Built-In VESA Local Bus IDE Host Adapter

2 High Speed Serial & 1 Parallel Ports

ATI Graphic Ultra Pro VLB with 2MB VRAM

NEC 4FGe 15" .28mm SVGA Monitor 76Hz

Keytronic 101 Keys Enhanced Keyboard

Microsoft DOS & Windows w/Disks and Manuals

Logitech Mouse Man 400dpi Serial Mouse

**\$2,988.00**

EISA VESA Local Bus System, Please Call

|                                                               |     |
|---------------------------------------------------------------|-----|
| 15" NEC 4FGe 1024x768 .28mm 76Hz NI Monitor .....             | 695 |
| Sound Blaster Pro 16 ASP with CD ROM Interface ..             | 209 |
| SummaSketch III 12x12 4 or 16 Buttons Digitizer .....         | 279 |
| Fujitsu 520MB IDE/SCSI II Hard Disk .....                     | 649 |
| Quantum 520MB IDE/SCSI II Hard Disk .....                     | 599 |
| ThrustMaster Flight Control System Joystick .....             | 80  |
| Pro Audio Spectrum 16 Sound Card<br>with SCSI Interface ..... | 159 |
| Toshiba CD-ROM 256K Buffer 200ms 330KB/sec. ....              | 409 |
| NEC CDR84 Internal MultiSpin CD-ROM 280ms ....                | 409 |

Intel Satisfaction with FAXability for Windows

|                                            |     |
|--------------------------------------------|-----|
| Model 200 Int. 14.4K/2400 Fax/Modem .....  | 275 |
| Model 300 Int. 9600/14.4K Fax/Modem .....  | 249 |
| Model 400 Int. 14.4K/14.4K Fax/Modem ..... | 395 |

PLEASE CALL FOR ITEMS NOT LISTED

### Orchid VESA Local Bus System

486DX 33MHz with 256K Cache

Intel 486DX-33MHz Processor Installed

Mini Tower Case with 230W Power Supply

Orchid 486DX-33MHz VLB w/256K Cache System Board

Intel DX2 66MHz Upgradable

4 MB RAM 70ns, Exp. to 32MB on Board

Teac 1.2MB and 1.44MB Floppy Drive

Quantum LPS240AT 244MB IDE Hard Disk

Orchid VLB IDE 2 Hard/2 Floppy Drive Controllers

2 Serial / 1 Parallel / 1 Game Ports

Orchid Fahrenheit 1280 VESA Local Bus 1MB RAM

MAG MX15F 15" SVGA 72Hz Digital Monitor

Keytronic 101 Keys Enhanced Keyboard

Logitech Mouse Man 400dpi Serial Mouse

**\$1,888.00**

Customize System, Please Call

## System Boards

All system boards come with CPU & no RAM

|                                                  |      |
|--------------------------------------------------|------|
| AIR 486DX-33/50MHz 3 VLB Slot, 256K Cache .....  | CALL |
| AMI Enterprise III 486DX2-66 256K EISA VLB ..... | 1250 |
| Diamond FastBus 486DX2-66MHz 256K Cache .....    | 870  |
| Micronics 486DX2-66MHz VESA Local Bus 256K ..... | 895  |
| NICE US Made 486DX Mini EISA VLB 256K .....      | CALL |
| NICE US Made 486DX-33MHz ISA VLB 256K .....      | 505  |
| Orchid SuperBoard 486DX-33MHz VLB 256K .....     | 525  |
| Comet 486DX-33MHz VLB 128K with ZIF Socket ..... | 475  |
| Comet 486DX-33MHz ISA 128K Cache .....           | 450  |
| Comet 386-40MHz 128K RAM Cache .....             | 185  |
| Comet 386SX-25MHz with CPU .....                 | 140  |

## Hard Drives

|                                            |     |
|--------------------------------------------|-----|
| Conner CP30104 120MB 17ms .....            | 185 |
| Conner CP30174E 170MB 17ms .....           | 209 |
| Conner CP30204 212MB 256K Cache 12ms ..... | 239 |
| Conner CP30304 340MB 12ms .....            | 329 |
| Maxtor LXT7120A 130MB 15ms .....           | 189 |
| Maxtor LXT7213A 212MB 15ms .....           | 229 |
| Maxtor MXT7245A 245MB IDE 15ms .....       | 249 |
| Maxtor LXT7345A 340MB 13ms .....           | 319 |

Fujitsu Hard Drives: 5 Year Warranty

|                                              |         |
|----------------------------------------------|---------|
| Fujitsu M2624 520MB IDE 3.5" 11ms .....      | 649     |
| Fujitsu M2624 520MB SCSI 3.5" 11ms .....     | 649     |
| Quantum ELS 85AT 85MB IDE .....              | 179     |
| Quantum ELS127AT 127MB IDE 15ms .....        | 199     |
| Quantum ELS170AT 170MB IDE Hard Disk .....   | 229     |
| Quantum LPS240AT 244MB IDE 256K Cache .....  | 255     |
| Quantum 525MB IDE/SCSI 12ms 256K Cache ..... | 575/595 |

## Floppy Drives

|                                           |       |
|-------------------------------------------|-------|
| Teac 360KB/1.2KB 5.25" Floppy Drive ..... | 55/55 |
| Teac 3.5" 1.44MB Floppy Drive .....       | 55    |
| Teac Dual 1.2 & 1.44MB Floppy Drive ..... | 135   |

## Power Supplies

|                                             |     |
|---------------------------------------------|-----|
| 200W XT Size Power Supply .....             | 59  |
| 250W AT Size Power Supply for Desktop ..... | 59  |
| 230W PS2 Size Power Supply .....            | 59  |
| 250W AT Size Power Supply for Tower .....   | 69  |
| 300W PC Power Cooling for Full Tower .....  | 185 |

## Scanners

|                                                     |     |
|-----------------------------------------------------|-----|
| Umax UC630 600dpi 24bit Flatbed Color Scanner ..... | 995 |
|-----------------------------------------------------|-----|

## Monitors

|                                                           |           |
|-----------------------------------------------------------|-----------|
| 14" Samsung Paper White VGA Mono Monitor .....            | 135       |
| 14" Addonics VGA 640x480 Color VGA Monitor .....          | 230       |
| 14" Addonics SVGA 1024x768 .28mm Monitor .....            | 265       |
| 14" Addonics SVGA 1024x768 .28mm NI Monitor .....         | 295       |
| 14" ViewSonic 6E SVGA 1024x768 NI Monitor .....           | 320       |
| 14" Sampo AlphaScan 1024x768 72Hz NI Monitor .....        | 360       |
| 15" Addonics SVGA 1024x768 70Hz Monitor .....             | 425       |
| 15" MAG MX15F 1280x768 .28mm SVGA Monitor .....           | 485       |
| 15" NEC 4FGe 1024x768 .28mm 76Hz NI Monitor .....         | 695       |
| 17" Addonics 1024x768 70Hz Low Radiation NI Monitor ..... | 795       |
| 17" Sony 1730 1024x768 70Hz .25mm NI Monitor .....        | 980       |
| 17" ViewSonic 17 1280x768 .28mm NI Monitor .....          | 1090      |
| 17" Nanao 550i /iw 1280x1024 .28mm NI Monitor ....        | 1030/1080 |
| 17" MAG MX17F 1280x768 .26mm NI Monitor .....             | 1029      |
| 17" NEC 5FG 1280x1024 74Hz .28mm Monitor .....            | 1350      |
| 20 Sampo AlphaScan 1280x1024 .31mm Monitor .....          | 1199      |
| 20" ViewSonic 20 1280x1024 .31mm NI Monitor .....         | 1899      |
| 21" Nanao F750i .31mm Flat Screen Monitor .....           | 2099      |

## Multimedia

|                                                               |         |
|---------------------------------------------------------------|---------|
| Media Vision Fusion CD 16 Multimedia System .....             | 479     |
| Pro Audio Spectrum 16 Sound Card with SCSI Interface .....    | 159     |
| Sound Blaster Pro 16 ASP with CD ROM Interface .....          | 209     |
| NEC CDR84 Internal MultiSpin CD-ROM 280ms .....               | 409     |
| Toshiba CD-ROM 256K Buffer<br>200ms 330KB/sec. Int/ Ext. .... | 409/519 |
| Future Domain 8bit CD-ROM Adapter w/ Driver .....             | 65      |

## Modems

|                                                         |         |
|---------------------------------------------------------|---------|
| US Robotics Courier and Sportster Modems .....          | CALL    |
| Intel SatisFAXtion Model 200 14.4K/2400 Fax/Modem ..... | 275     |
| Intel SatisFAXtion Model 300 9600/14.4K Fax/Modem ..... | 249     |
| Intel SatisFAXtion Model 400 14.4K Fax/Modem .....      | 395     |
| Intel SatisFAXtion Model 400e 96/14.4K Ext. Modem ..... | 425     |
| Intel 14.4EX External Modem with 16MHz Processor .....  | 449     |
| GVC 14.400 V.32bis V.42bis Int./Ext. Fax/Modem .....    | 165/185 |
| GVC 96/2400 Baud Internal Fax/Modem .....               | 70      |
| Complete PC 96/24 Fax/Modem for Windows .....           | 109     |

## Network

|                                                    |      |
|----------------------------------------------------|------|
| 3Com Etherlink III 3C509 TP Ethernet Adapter ..... | 129  |
| SMC Elite Ultra Card Ethernet Adapter .....        | 125  |
| Other Ethernet & Arcnet Adapters .....             | CALL |
| Artisoft LanTastic Products .....                  | CALL |
| Novell Netware & Network Adapters .....            | CALL |

## Video Adapters

|                                                         |         |
|---------------------------------------------------------|---------|
| ATI Ultra Plus 2MB DRAM & 400dpi Mouse .....            | 279     |
| ATI Ultra Pro ISA 2MB VRAM Video Adapter .....          | 359     |
| ATI Ultra Pro VLB 2MB VRAM Video Adapter .....          | 359     |
| ATI Ultra Pro EISA 2MB VRAM Video Adapter .....         | 409     |
| Diamond SpeedStar Pro ISA / VLB 1MB RAM .....           | 138/138 |
| Diamond Stealth 24 VLB 1MB RAM Accelerator .....        | 185     |
| Diamond Stealth Pro VLB 1MB/2MB Accelerator .....       | 259/359 |
| Diamond Viper VLB 2MB VRAM Video Adapter .....          | 429     |
| Hercules Graphite ISA 1MB VRAM Accelerator .....        | 260     |
| Hercules Graphite VLB 1MB/2MB<br>VRAM Accelerator ..... | 299/420 |
| Orchid Fahrenheit 1280 Plus ISA w/1MB RAM .....         | 159     |
| Orchid Fahrenheit 1280 VLB 1MB Video Adapter .....      | 165     |
| Orchid Fahrenheit 1280 Voice Annotation 1M VLB .....    | 199     |
| Accumos Windows Accelerator 256/512K .....              | 45/65   |
| Trident 8900 Chip Set 1MB SVGA Adapter .....            | 69      |
| #9 GXi Video Adapter Lever 25 to 29TC .....             | CALL    |
| #9GXE Level 10/11/12 Graphics for Windows .....         | CALL    |

## Input Devices

|                                                       |       |
|-------------------------------------------------------|-------|
| Keytronic/Mitsumi 101 Keys Enhanced Keyboard .....    | 45/40 |
| Northgate 101 or 102/Ultra Enhanced Keyboard .....    | 79/89 |
| Logitech 400dpi Serial/Bus Mouse Man .....            | 58/78 |
| Microsoft 400dpi Serial/Bus Mouse .....               | 75    |
| SummaSketch III 12x12 4 or 16 Buttons Digitizer ..... | 279   |
| ThrustMaster Flight Control System Joystick .....     | 80    |

## Controllers & Adapters

|                                                    |         |
|----------------------------------------------------|---------|
| 2 Serial, 1 Parallel, 1 Game Ports Card .....      | 18      |
| IDE with 2 Serial, 1 Parallel, 1 Game Ports .....  | 30      |
| Kouwell 2S/1P/1G w/HiSpeed 16550 UART Chip .....   | 55      |
| Ultrastor ESDI Controller w/32K Buffer .....       | 169     |
| UltraStor 34F VESA Local Bus SCSI Bus Master ..... | 265     |
| Adaptec 1522/1542C Kit SCSI Host Adapter .....     | 155/255 |
| Adaptec 2742 EISA SCSI 32Bit Adapter Kit .....     | 390     |
| Promise IDE w/512K Cache Upgradable to 8.5MB ..... | 135     |
| Promise IDE w/0MB Cache Upgradable to 16MB .....   | 155     |
| Promise IDE VLB Cache Host Adapter .....           | 239     |

## Tape Backups

|                                                     |         |
|-----------------------------------------------------|---------|
| Colorado 250MB Ext. Parallel Port Tape Backup ..... | 389     |
| Colorado 120/250MB Internal Tape Backup .....       | 159/189 |
| Palindrome DAT Tape Backup for Novell Netware ..... | CALL    |
| Mountain & Archive Tape Backup .....                | CALL    |

NO SURCHARGE ON CREDIT CARDS

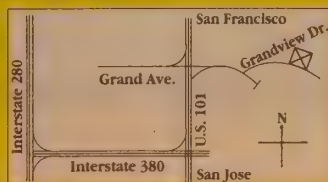
## Comet Micro System

1301 Grandview Drive

South San Francisco, CA 94080

Phone: (415) 615-9123 Fax: (415) 615-0287

MON-FRI 9am to 6pm, SAT 10am to 5pm



## TERMS & CONDITIONS

Prices subject to change w/o notice. Not responsible for typos/errors. No surcharge on credit cards on advertised prices only. Please call for items not listed. One year warranty on all parts. Three years warranty on labor. Dealer & Quantity pricing available.

Micro Market Place



|                                                                                                                                       |                                                                                                                                      |                                                                                                                                       |                                                                                                                                    |                                                                                                                                         |                                                                                                                                         |                                                                                                                                      |                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>VESA 2 LOCAL BUS</b><br><b>486-66DX2</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$818</b><br>Motherboard Only<br><b>\$638</b> | <b>VESA 2 LOCAL BUS</b><br><b>486-50DX</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$758</b><br>Motherboard Only<br><b>\$568</b> | <b>VESA 2 LOCAL BUS</b><br><b>486-50DX2</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$668</b><br>Motherboard Only<br><b>\$478</b> | <b>VESA 2 LOCAL BUS</b><br><b>486-33</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$608</b><br>Motherboard Only<br><b>\$418</b> | <b>3 EISA 2 LOCAL BUS</b><br><b>486-66DX2</b><br><b>256K CACHE</b><br><b>SYSTEM</b><br><b>\$968</b><br>Motherboard Only<br><b>\$788</b> | <b>3 EISA 2 LOCAL BUS</b><br><b>486-50DX2</b><br><b>256K CACHE</b><br><b>SYSTEM</b><br><b>\$818</b><br>Motherboard Only<br><b>\$628</b> | <b>3 EISA 2 LOCAL BUS</b><br><b>486-33</b><br><b>256K CACHE</b><br><b>SYSTEM</b><br><b>\$748</b><br>Motherboard Only<br><b>\$558</b> | <b>486-66DX2</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$798</b><br>Motherboard Only<br><b>\$608</b> |
| <b>486-50DX</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$728</b><br>Motherboard Only<br><b>\$548</b>                             | <b>486-50DX2</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$648</b><br>Motherboard Only<br><b>\$458</b>                           | <b>486-40</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$578</b><br>Motherboard Only<br><b>\$398</b>                               | <b>486-33</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$578</b><br>Motherboard Only<br><b>\$398</b>                            | <b>486-50SLC</b><br><b>64K CACHE</b><br><b>SYSTEM</b><br><b>\$508</b><br>Genuine IBM<br>Motherboard<br><b>\$318</b>                     | <b>486-25SX</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$368</b><br>Motherboard Only<br><b>\$178</b>                               | <b>386-40</b><br><b>128K CACHE</b><br><b>SYSTEM</b><br><b>\$328</b><br>Motherboard Only<br><b>\$138</b>                              | <b>386-33SX</b><br><b>SYSTEM</b><br><b>\$268</b><br>Motherboard Only<br><b>\$78</b>                        |

## BASIC SYSTEM CONFIGURATION:

- 1MB RAM Expandable
- IDE 2FD/2HD Controller
- 101 Key Mitsumi Keyboard
- Teac 1.2 or 1.44 MB Floppy Drive
- 2 Serial, 1 Parallel, 1 Game Ports
- Mini-Desk Top or Tower Case
- Power Supply
- One Year Warranty

**LIFETIME LABOR WARRANTY ON SYSTEM!**

## NEW SOUND CARD FOR FUN & BUSINESS

**LaserWAVE supra 16**

**\$159**

- Adlib, SoundBlaster 2.0 Compatible
- Recording and playback songs, music and voice
- Play CD-Audio Albums
- Create interactive training with voice output
- Interactive help systems for business application
- Musical composition using MIDI interface
- Supports voice recognition
- Mix realty voice and music for presentation
- Supports Windows Sound System compatible software

## "TWIN SOUND" SPEAKER

**\$60**

- Installs into 5.25" Drive Bay
- No Wires, No Batteries, No Adapters, No Mess!
- Frequency Modulated Flashing LEDs

### VIDEO CARDS

|                                  |         |
|----------------------------------|---------|
| ATI Ultra Pro VLB 2MB            | \$355   |
| ATI Ultra Pro 2MB ISA            | 355     |
| ATI Ultra Graphics Plus 2MB      | 269     |
| Diamond Stealth 24               | \$150   |
| Diamond Stealth 24 VLB (S3 Chip) | 150     |
| Diamond Stealth Pro (VRAM)       |         |
| 1/2 MB                           | 239/349 |
| Diamond Viper 2MB VRAM           | 375     |
| Diamond Speedstar 1MB VLB        | 118     |

|                                       |       |
|---------------------------------------|-------|
| ORCHID FAHRENHEIT DRAM w/ VA          | \$150 |
| ORCHID FAHRENHEIT VESA LOCAL BUS w/VA | 150   |

|                             |       |
|-----------------------------|-------|
| GENOA VESA LOCAL BUS        | \$108 |
| ET 4000 1024x768 NON-INT.   | 79    |
| TRIDENT VGA (1024x768) 1MB  | 56    |
| Accumos VGA 800x600/256K    | 28    |
| Accumos 1024x768/512K       | 39    |
| GENERIC Monochrome Graphics |       |
| w/Printer Port              | 17    |

### DRIVE CONTROLLERS

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| AIR VESA IDE/SCSI w/2S, 1P                                            | \$189   |
| DTC 3280 SCSI                                                         | 95      |
| DTC 2290 EISA IDE FD/HD                                               | 135     |
| IDE Controller w/2S/1P/1G                                             | 19      |
| IDE I/O VLB (True 32 Bit) 2S/1P                                       | 38      |
| Adaptec SCSI 1542C                                                    |         |
| w/ software                                                           | 195/248 |
| Adaptec SCSI 2742T EISA w/Floppy & Software (14 SCSI Devices Support) | 399     |
| Ultrastor VLB SCSI II 32K Cache                                       | 275     |

### I/O CARDS

|                                  |      |
|----------------------------------|------|
| AT I/O (2S 16550/1P/1G) Hi-Speed | \$42 |
| RS-232 card                      | 17   |
| AT-I/O (2S/1P/1G)                | 15   |
| Printer Card                     | 12   |
| Game Card                        | 12   |

### MONITORS

|                      |       |
|----------------------|-------|
| NANAO F340iw 15" .28 | \$695 |
| F550i 17"            | 1075  |
| F550iw               | 1125  |

|                                      |      |
|--------------------------------------|------|
| T560i 17"                            | 1695 |
| T660i 20"                            | 2595 |
| F750i 20"                            | 2095 |
| KFC 17" Flat Screen .26 Digital Cont | 835  |
| STANDARD 17" 1280x1024 .26           | 669  |
| VIEWSONIC                            |      |

|                                        |      |
|----------------------------------------|------|
| 17" 1280x124 .28NI                     | 1125 |
| 20" 1600x1280 .28NI                    | 1785 |
| V6E Non-Int 14"                        | 315  |
| V5E                                    | 395  |
| 15" 1280x1024 NI                       | 545  |
| V4E 1024x768 VGA 14"                   | 289  |
| EYEQ 1024x768 VGA .28                  | 255  |
| TOUCH SYGA 1024x768 (OEM Goldstar) .39 | 215  |
| TOUCH NI 1024x768 (OEM Goldstar) .28   | 275  |

|                                             |      |
|---------------------------------------------|------|
| STANDARD TECHNOLOGIES                       |      |
| 1024x768 .28 Full Screen                    | 268  |
| VGA Mono                                    | 109  |
| NEC 4FGE                                    | 705  |
| 3FGE                                        | 599  |
| 14" Flat Screen Mono (Amber or Paper White) | 95   |
| SONY 1430S Non-Int (1024x768) 14"           | 599  |
| 1604S 16"                                   | 965  |
| 1730 17"                                    | 995  |
| 2038 20"                                    | 2295 |

|                             |     |
|-----------------------------|-----|
| MAG MX 15F .28 1280x1024 NI | 535 |
| MAG MX 17F .26 1280x1024 NI | 975 |

### KEYBOARDS

|                                      |       |
|--------------------------------------|-------|
| Keytronic 101                        | \$37  |
| Mitsumi 101                          | 30    |
| Chicony 5161 101 Keyboard (clicking) | 39    |
| MAXISWITCH 101 Keyboard              | 35    |
| Omni 102/Ultra                       | 69/95 |
| Black 101 Keyboard                   | 39    |

### MODEMS & FAX MODEMS

|                                |         |
|--------------------------------|---------|
| ZOLTRIX 2400 Internal Modem    | \$35    |
| 24/96 Fax Modem (Send/Receive) | 52      |
| 14400 Fax Modem V.42 Int/Ext   | 144/185 |

### DISK DRIVES

|                                   |      |
|-----------------------------------|------|
| All HD Come With Mounting Bracket |      |
| TEAC 1.2 MB                       | \$51 |

|                          |     |
|--------------------------|-----|
| 3.5" (1.44 MB)           | 46  |
| 1.2, 1.44 MB Combo Drive | 125 |

|                          |      |
|--------------------------|------|
| MAXTOR                   |      |
| 7131A 130 MB 15 ms (new) | 188  |
| 7213A 213 MB             | 229  |
| 7245A 240 MB             | 239  |
| 7345A (new) 340 MB       | 319  |
| MXT540S 8.5ms            | 779  |
| 7345S SCSI               | 395  |
| MXT540A 540 MB           | 779  |
| 1.2 Gigabyte 13ms        | 999  |
| 3.5" 1.2 Gigabytes 8.5ms | 1238 |
| 1.7 Gigabyte 13ms        | 1238 |

|             |     |
|-------------|-----|
| CONNER      |     |
| 120 MB 19ms | 168 |
| 170 MB 17ms | 185 |
| 250 MB 14ms | 239 |
| 540 MB      | 599 |

|                |     |
|----------------|-----|
| QUANTUM        |     |
| LPS 240AT IDE  | 255 |
| LPS 240AT SCSI | 265 |

### NETWORK CARDS

|                         |       |
|-------------------------|-------|
| Ethernet 8 Bit          | \$65  |
| Ethernet 16 Bit         | 79    |
| Arcnet STar/Bus 8 Bit   | 49    |
| 10 BT Ethernet 16/8 Bit | 71/65 |

### TAPE BACK-UP

|                                  |       |
|----------------------------------|-------|
| COLORADO Tape Back-Up 120 MB     | \$147 |
| Tape Back-Up 250 MB              | 179   |
| DC-2120 Tape Cartridge For Above | 1850  |
| DC-2120 Tape Cartridge Formatted | 22    |
| COLORADO Drive External Kit      | 109   |
| COLORADO Tracker 250 MB          | CALL  |

### HIGH QUALITY MAIN BOARDS

|                                    |           |
|------------------------------------|-----------|
| ASUS 486-66 MHz w/ CPU             |           |
| w/128/256K Cache                   | \$665/690 |
| ASUS 486-50MHz w/CPU w/ 256K       | 620       |
| ASUS 486-50MHz DX2 128K Cache      | 505       |
| ASUS 486-33 MHz w/CPU w/128K Cache | 445       |
| 486-50 MHzSX VLB w/IBM CPU         | 338       |
| 486-50 SLC (IBM)                   | 318       |

|                           |     |
|---------------------------|-----|
| 486-25SX w/ CPU w/Cache   | 178 |
| 386-40 (128K Cache) w/CPU | 138 |
| 386-33SX                  | 78  |

### COMPUTER CASE

|                               |      |
|-------------------------------|------|
| 14" Baby AT Case W/ 200W P/S  | \$69 |
| 17" Baby AT Case W/200W P/S   | 89   |
| Vertical Case 250W P/S        | 119  |
| Medium Vertical Case 250W P/S | 95   |
| Mini Vertical Case 200W P/S   | 69   |
| Sleek Black Case              | CALL |

### LOGITECH PRODUCTS

|                                  |       |
|----------------------------------|-------|
| Logitech Trackman Combo          | \$75  |
| Logitech Trackman Portable       | 95    |
| Logitech Bus Mouseman            | 64    |
| Logitech Mouseman Combo          | 64    |
| First Mouse                      | 37    |
| Mouse (Serial 9 Pin)             | 9     |
| Microsoft Mouse Bus/Ser (400dpi) | 85/75 |
| Trackball                        | 24    |

### PRINTERS

|                               |       |
|-------------------------------|-------|
| Panasonic KXP-1624 132 Column | \$349 |
| KXP-1123                      | 195   |
| KXP-1124i                     | 259   |

### MISC.

|                                 |             |
|---------------------------------|-------------|
| MS DOS 6 (w/ System only)       | \$48        |
| 6/10/15/25' printer cable       | 350/6/10/20 |
| Keyboard Extension cable        | 5           |
| Monitor Extension cable         | 5           |
| Keyboard Drawer/Under Table     | 27/18       |
| Computer floor stand            | 795         |
| Power Center                    | 18          |
| Printer switch box (AB/ABCD)    | 950/19      |
| Power supply 220W               | 48          |
| Memory Chips (DIPS/SIPPS/SIMMS) | CALL        |
| Math Co-Processors              | CALL        |
| Disk Box                        | 750         |
| Power Strip                     | 7           |
| Keyboard Rest                   | 350         |

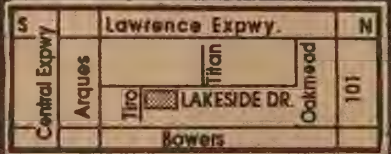
### U.P.S.

|        |       |
|--------|-------|
| 550 VA | \$229 |
|--------|-------|

**CALL FOR LATEST PRICES!**

**AROMA**  
Computer Systems  
Always Ready to Offer More Assistance

470 LAKESIDE DR. Suite F  
SUNNYVALE, CA 94086  
Tel: (408) 736-4355 M-F 9-7  
FAX: (408) 736-4356 Sat 10-4  
Prices Subject To Change w/o Notice  
Prices Good At Sunnyvale Store Only  
\$20 surcharge for PO processing on systems



**MODESTO OFFICE:**  
3430 Tully Rd., Suite #21  
Modesto, CA 95350  
Tel: (209) 525-8080  
FAX: (209) 525-8120



# YOUR ONE STOP MULTIMEDIA SOURCE

## CD-ROM

- **PANASONIC (MATSUSHITA) 523 ..\$179**  
380MS ACCESS TIME, 150KB TRANSFER RATE, FREE CADDY  
INTERNAL DRIVE WITH CONTROLLER CARD ..\$189
- **PANASONIC 532 (MATSUSHITA) (SCSI)**  
290MS ACCESS TIME, 150KB TRANSFER RATE, PHOTO-CD COMPATIBLE, FREE CADDY  
INTERNAL DRIVE .....\$309  
EXTERNAL KIT FOR PANASONIC 522/532 .....\$60
- **PANASONIC 533 (MATSUSHITA) (SCSI)..\$369**  
290MS ACCESS TIME, 300KB TRANSFER RATE, 256K BUFFER
- **PANASONIC 562 (MATSUSHITA) .....\$249**  
320MS ACCESS TIME, 300KB TRANSFER RATE, 64K BUFFER, W/O CONTROLLER CARD
- **TEXEL DM-3024N (SCSI)**  
265MS ACCESS TIME, MULTI-SPIN, FREE CADDY, PHOTO CD COMPATIBLE  
INTERNAL DRIVE .....\$359  
EXTERNAL DRIVE .....\$445
- **TOSHIBA XM-3401 (SCSI)**  
FASTEST CD-ROM, 200MS ACCESS TIME, 330KB TRANSFER, MULTI-SPIN, FREE CADDY  
INTERNAL DRIVE .....\$419  
EXTERNAL DRIVE .....\$569
- **TRANTOR INTERFACE KIT (T130B) ...\$79**
- **AUDIO CABLES .....\$6<sup>50</sup>**

**FREE INSTALLATION WITH ANY CD-ROM DRIVE PURCHASE!!**

## CD-ROM SOFTWARE TITLES

WITH DRIVE PURCHASE PRICES

### ENTERTAINMENT CD-ROM TITLES

|                                       |      |
|---------------------------------------|------|
| CHESSMASTER 3000 MPC.....             | \$19 |
| JONES IN THE FAST LANE MPC.....       | 25   |
| KINGS QUEST V MPC.....                | 19   |
| LOOM FROM LUCAS FILM.....             | 25   |
| MAVIS BEACON TEACHES TYPING MPC.....  | 25   |
| MEDIA CLIPS 4 PACK FROM ARIS.....     | 49   |
| SECRET WEAPONS OF LUFTWAFFE.....      | 25   |
| SHERLOCK HOLMES, CONS, DET.....       | 25   |
| TOTAL BASEBALL.....                   | 29   |
| WHERE IN THE WORLD IS.....            |      |
| CARMEN SAN DIEGO.....                 | 25   |
| CD STORYTIME DOS.....                 | 16   |
| STELLAR 7 DOS.....                    | 19   |
| MONKEY ISLAND.....                    | 25   |
| COMPOSER QUEST MPC.....               | 29   |
| BEAUTY & BEAST.....                   | 15   |
| PETER & WOLF.....                     | 15   |
| MIXED-UP MOTHER GOOSE.....            | 19   |
| DESERT STORM MPC.....                 | 19   |
| WING COMMANDER & ULT VI DOS.....      | 25   |
| PC GRAPHICS & SOUND DEMO.....         | 19   |
| SPORTS BEST.....                      | 22   |
| BATTLE CHESS.....                     | 19   |
| CD GAME PACK II.....                  | 25   |
| JETS & PROPS (2 CD).....              | 22   |
| SPACE QUEST IV BY SIERRA.....         | 19   |
| DINOSAUR ADVENTURE.....               | 29   |
| SPACE ADVENTURE.....                  | 29   |
| WILLY BEAMISH-THE ADVENTURE.....      | 25   |
| WHALE OF TALES.....                   | 68   |
| NATIONAL PARK DOS.....                | 19   |
| MARIO IS MISSING WORLD ATLAS 3.2..... | 19   |
| SLEEPING BEAUTY.....                  | 18   |
| MANTIS EXPERIMENTAL FIGHTER.....      | 18   |
| BEYOND THE WALL OF STARS.....         | 29   |
| WHO KILLED SAM RUPERT?.....           | 29   |
| INTERACTIVE STORYTIME VOL. I.....     | 19   |
| 501 SOUND WAVE #1.....                | 14   |
| KODAK PHOTO CD MPC.....               | 19   |
| SPORTS ILLUSTRATED.....               | 25   |

### EDUCATIONAL CD-ROM TITLES

|                                        |      |
|----------------------------------------|------|
| ANIMALS VI.O SOFTWARE TOOL.....        | \$25 |
| FAMILY DOCTOR.....                     | 27   |
| GUINNESS DISC OF RECORDS 1993 MPC..... | 27   |
| TIME MAGAZINE ALMANAC 1991.....        | 25   |
| U.S. ATLAS WITH AUTOMAP.....           | 25   |
| U.S. HISTORY.....                      | 29   |
| WORLD ATLAS MULTIMEDIA MPC.....        | 19   |

|                                                  |    |
|--------------------------------------------------|----|
| SOUND LIBRARY MPC.....                           | 19 |
| REFERENCE LIBRARY MPC.....                       | 21 |
| LANGUAGE OF THE WORLD FOR WINDOWS.....           | 29 |
| ISLAND DESIGN 2 CD.....                          | 19 |
| FAMILY CHOICE.....                               | 27 |
| LIBRARY OF THE FUTURE 1ST.....                   | 45 |
| NAT'L GEOGRAPHIC MAMMALS.....                    | 27 |
| WORLD VIEW.....                                  | 15 |
| OCEAN DIGITAL IMAGERY VI.....                    | 29 |
| ELEC LIBRARY OF ART VI.....                      | 29 |
| ELEC LIBRARY OF ART V2.....                      | 29 |
| GREAT CITIES VOL 1.....                          | 21 |
| GREAT CITIES VOL 2.....                          | 21 |
| TIME TABLE OF HISTORY.....                       | 19 |
| TOOLWORKS ENCYCLOPEDIA.....                      | 54 |
| WILD PLACES.....                                 | 15 |
| MACMILLAN DICT. CHILDREN.....                    | 35 |
| PRESIDENTS.....                                  | 78 |
| TIME TABLE OF HISTORY (BUSINESS & POLITICS)..... | 19 |
| USA WARS: CIVIL WAR.....                         | 35 |
| USA WARS: KOREA.....                             | 35 |
| USA WARS: WW II.....                             | 35 |
| USA WARS: VIET NAM DOS.....                      | 35 |
| FAMILY EDUCATION COLLECTIONS.....                | 23 |
| US ATLAS.....                                    | 19 |
| CIA WORLD FACT BOOK.....                         | 19 |
| SOUND LIBRARY.....                               | 19 |
| BRING THE WORLD TO YOUR SENSES.....              | 15 |
| TOOL WORKS REFERENCE LIBRARY.....                | 21 |
| PLAYING WITH LANGUAGE: ENGLISH.....              | 29 |
| PLAYING WITH LANGUAGE: FRENCH.....               | 29 |
| PLAYING WITH LANGUAGE: GERMAN.....               | 29 |
| PLAYING WITH LANGUAGE: JAPANESE.....             | 29 |
| PLAYING WITH LANGUAGE: SPANISH.....              | 29 |
| VITAL SIGNS MPC.....                             | 69 |
| DICTIONARY OF THE LIVING WORLD.....              | 29 |
| ARTHUR TEACHER TROUBLE.....                      | 25 |
| MIDI MUSIC SHOP.....                             | 29 |
| MAYO CLINIC FAMILY HEALTH BOOK.....              | 29 |
| WIZARD PC.....                                   | 19 |
| CD DELUXE PACK 4 TITLES IN 1.....                | 43 |
| SURVEY OF WESTERN ART MPC.....                   | 29 |
| THE RIGHT COLLEGE.....                           | 19 |
| KILLER TRUCK CD-MUSIC LIBRARY.....               | 18 |
| SFX-300 SOUND EFFECTS.....                       | 14 |
| ATLAS PACK V3.1/3.01 WORLD/US.....               | 25 |
| BARRONS COLLEGE GUIDE.....                       | 19 |
| ELECTRONIC HOME LIBRARY.....                     | 29 |
| MULTIMEDIA AUDUBON'S BIRDS.....                  | 19 |
| MULTIMEDIA AUDUBON'S MAMMALS.....                | 19 |
| SHAKESPEARE.....                                 | 17 |

\*CALL FOR MORE INFORMATION ON SOFTWARE TITLE AVAILABILITY & PRICING

## CREATIVE

CREATIVE LABS, INC.

## MULTIMEDIA PRODUCTS

|                                                                                     |                 |
|-------------------------------------------------------------------------------------|-----------------|
| • SOUND BLASTER PRO DELUXE.....                                                     | 118             |
| • STEREO SOUND CARD W/MPC ENCYCLOPEDIA HSC INTERACTIVE & MONOLOGUE FOR WINDOWS..... |                 |
| • SOUND BLASTER PRO 16.....                                                         | 165             |
| • CADDY.....                                                                        | 5 <sup>50</sup> |
| • SPEAKERS.....                                                                     | 18              |
| • LABTEC CS-150.....                                                                |                 |
| • SPEAKER 25 WATT.....                                                              | 44              |
| • SPEAKERS 80 WATT.....                                                             | 75              |
| • AC ADAPTER FOR SPEAKER.....                                                       | 8               |
| • HEADPHONES.....                                                                   | 8               |

MEDIA VISION

"MEDIA VISION" MUSIC CARD (OEM) ...\$145  
• PRO AUDIO SPECTRUM 16

GRAVIS

ULTRA SOUND MUSIC CARD  
16 BIT, 32 VOICE, CD QUALITY SOUND .....\$139

## CD-ROM SOFTWARE TITLES

BUNDLE SPECIALS:

(WITH AROMA'S MULTIMEDIA PRODUCT PURCHASE ONLY)

THE 7TH GUEST \$35 (OEM)

|                                         |      |
|-----------------------------------------|------|
| • COMPTON'S FAMILY ENCYCLOPEDIA... ..   | \$29 |
| • LOTUS® 1-2-3 MULTIMEDIA PC.....       | 89   |
| • COMPTON'S PC ENCYCLOPEDIA.....        | 68   |
| • MICROSOFT® BOOKSHELF MPC.....         | 48   |
| • MICROSOFT WORK MPC.....               | 43   |
| • COMPTON'S INTERACTIVE ENCYCLOPEDIA .. | 99   |

## 486-33 MHZ MULTIMEDIA COMPLETE SYSTEM SVGA W/CD-ROM

PACKAGE INCLUDES:

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| • 486-33 MHZ W/128K CACHE             | • 1.2 OR 1.44 MB FLOPPY DRIVE           |
| • INTEL 80486-33 CPU                  | • 14" SVGA 1024X768 .28MM COLOR MONITOR |
| • 4 MB RAM                            | • SVGA CARD W/1 MB                      |
| • 120 MB HARD DRIVE                   | • IDE CONTROLLER (25/1P/1G)             |
| • PANASONIC CD-ROM MODEL 522          | • 101 KEYBOARD                          |
| • MEDIA VISION MUSIC CARD SPECTRUM 16 | • LABTEC CS-150 SPEAKERS                |

**\$1589**

CALL FOR OTHER CONFIGURATIONS & OPTIONS

### CD TITLES FOR MAC

|                              |      |
|------------------------------|------|
| ANIMALS.....                 | \$29 |
| ATLAS PACK-US/WORLD.....     | 29   |
| COLOR IT.....                | 25   |
| GROLIER ENCYCLOPEDIA.....    | 54   |
| LUCAS GAME PAC.....          | 25   |
| MAYO CLINIC HEALTH BOOK..... | 29   |
| PUBLISH IT.....              | 29   |
| SHERLOCK HOLMES.....         | 28   |

### BUSINESS CD-ROM TITLES

|                                    |      |
|------------------------------------|------|
| AMERICAN BUS. PHONE BOOK.....      | \$19 |
| BUSINESS & ECONOMIC ATLAS.....     | 27   |
| PUBLISH-IT 2.0 DOS.....            | 29   |
| AUTHORWARE STAR FOR WINDOWS.....   | 39   |
| MACROMEDIA ACTION FOR WINDOWS..... | 28   |
| Q&A DOS 4.0.....                   | 32   |
| BUSINESS BACKGROUND.....           | 19   |
| MONEY MONEY MONEY.....             | 19   |

### SHAREWARE

|                            |      |
|----------------------------|------|
| PC-SIG 11TH Ed DOS.....    | \$19 |
| PC-SIG 12TH Ed DOS.....    | 29   |
| SO MUCH SHAREWARE II.....  | 19   |
| SO MUCH SHAREWARE III..... | 23   |
| THE SHAREWARE CONCEPT..... | 14   |
| WINWARE VOL. 3.....        | 19   |
| DR. GAMES DOS.....         | 14   |
| DR. SHAREWARE DOS.....     | 14   |
| DR. MUSIC DOS.....         | 14   |
| DR. WINDOWS WIN.....       | 14   |

**AROMA**  
Tech, Inc.

470 LAKESIDE DR. Suite F  
SUNNYVALE, CA 94086

Tel (408) 736-4355 M-F 9-7  
FAX (408) 736-4356 Sat 10-4

Prices Subject To Change W/o Notice  
Prices Good At Sunnyvale Store Only



MODESTO OFFICE  
3430 Tully Rd. Suite 201  
Modesto, CA 95350  
Tel (209) 525-8080  
FAX (209) 525-8120



# Project Gutenberg: Free "Books" Online

BY KEVIN M.  
SAVETZ

**W**hat if books were free? What if anyone could get a copy of whatever books he or she wanted? Would libraries become extinct? Would bookstores crumble?

When Johann Gutenberg invented movable type in the 1400s, the cost of books plummeted to a fraction of their former prices, and thousands of hours of production time were saved. For the first time, the general public had access to books.

Michael Hart wants to lead a similar revolution.

## ELECTRONIC GUTENBERG

In 1971, Hart was given \$100,000,000 in computer time by the operators of the Xerox Sigma V mainframe at the University of Illinois. In an effort to "earn" his free computer time, Hart typed in the Declaration of Independence and attempted to distribute it across the network so everyone could have one.

With that act, Project Gutenberg was born. Today, this nonprofit organization releases electronic versions of public-domain literature. Its goal is to give away one hundred billion electronic texts by the end of 2001—10,000 titles, each distributed to 100 million people. "There are predicted to be a billion people on the networks by 2001. If we hit 10% of them, that's a trillion," says Hart, executive director of Project Gutenberg.

The Project Gutenberg volunteers release an electronic edition of a work a short time after that book reaches the public domain. Each document is in plain-vanilla ASCII, so that everyone using anything from Apples to Z-80s is able to read them. Fancy graph-

ics and text formatting are spurned in favor of small, easily shared documents.

Titles already released include classic literature such as *Aesop's Fables*, *Alice in Wonderland*, *Moby Dick*, and works of Shakespeare; historical documents such as the Magna Carta, US Declaration of Independence, and the US Constitution; reference books such as *Roget's Thesaurus*, almanacs, census data, the *CIA World Fact Book*, and mathematical constants; and religious documents such as the Bible and the Book of Mormon.

Why would anyone want to read a book on a computer rather than... well, from a book? "The biggest advantage of electronic books," Hart says, "is they cost about one

**"The biggest advantage of electronic books."**

Hart says, "is they cost about one one-hundredth of what a book costs. If you buy a copy of *Alice in Wonderland* right now, even in paperback, it will cost at least five bucks. On a 1.44-megabyte floppy, the same book uses a nickel's worth of space."

one-hundredth of what a book costs. If you buy a copy of *Alice in Wonderland* right now, even in paperback, it will cost at least five bucks. On a 1.44-megabyte floppy, the same book uses a nickel's worth of space."

Because electronic texts (or "e-texts") are stored on a computer, it is much simpler to search a book—or an entire library—for specific information. Research using e-texts is faster and easier than using traditional media. "My favorite example,"

Hart says, "is a paper I wrote on death and marriage in *Hamlet*, *Macbeth*, *Romeo and Juliet*, and *Othello*. This is the kind of paper you couldn't even write without a computer. There are too many citations for even a Shakespeare scholar—you would be up to the ceiling in index cards.

"I am hoping—presuming almost—that as books are added to the public domain electronic library, these kinds of papers will be written. Your everyday research paper is 90% research and 10% writing. With e-texts, it will be 10% research and 90% writing the paper," he says. Research using e-texts doesn't require trips to the library and allows more time for thinking about what to write rather than shuffling pages. According

to Hart, because the actual research will take less time, researchers will have more time for original thought.

"The term 'exhaustive research' will disappear, because it won't exhaust you any more," he says. "Painstaking research will be as far in the past as painstaking hand copying in the monasteries."

Although the idea of reading books on a computer screen may seem farfetched now, Hart believes that as the cost of storing information

and accessing networks continues to fall, electronic texts will become a standard method of reading and retrieving information. "I'm not saying books are going to completely die out in the next ten years, but this is an idea whose time has come," Hart says.

So far, the volunteer staff has released about seventy texts in electronic form. Hart says the number of volunteers who type or scan books triples every year. There are currently about two hundred volunteers. Hart

Copyright © 1993 by Kevin M. Savetz. All rights reserved. Kevin Savetz is a free-lance writer based in Arcata, California. His email address is "savetz@rahul.net". His two cats are of the Cheshire variety.



# PC WAREHOUSE

## 80 Locations Nationwide

You'll come for the price  
You'll stay for the service

### NOVELL Networks

Service Consulting

Installation

### Special

HP OMNIBOOK 300-40

Great Low Price

**\$1549**

### Multimedia Sources

#### CD ROM

Sony 31A Int (490ms, 150KB).....\$189  
Mitsumi 005s Int (350ms, 150KB).....\$189  
NEC 74 Ext (280ms, 300KB).....\$529  
NEC 84 Int (280ms, 300KB).....\$439  
Texel 3024 Int (265ms, 300KB).....\$359  
Texel 5024 Ext (265ms, 300KB).....\$449  
Toshiba 3401B Int (200ms, 330KB).....\$399  
Toshiba 3401E Ext (200ms, 330KB).....\$549

#### SOUND CARD

Sound Blaster 16ASP.....\$209  
Sound Blaster Pro Deluxe.....\$139  
Media Vision Pro Audio Spectrum 16.....\$129

### Toshiba Notebook

T1900 (486SXA-20, 120MB HDD).....\$1789  
T1900C (486SXA-20, 120/200MB HDD).....\$2399/2679  
T4500 (486SX-20, 120/200MB HDD).....\$2089/2399  
T4500C (486SX-20, 120/200MB HDD).....\$2959/3219  
T4600 (486SL-33, 120/200MB HDD).....\$2839/3119  
T4600C (486SL-33, 200/340MB HDD).....\$4299/4689

### Kenitec Notebook

486SLC-25 (80/120/200MB HDD).....\$1249/1289/1439  
486SLC-33 (80/120/200MB HDD).....\$1299/1389/1489

Price for aboves based on 4 MB memory

### SERVICE SOLUTIONS

- System Upgrade
- System Configuration
- Computer Rental
- Set Up & Installation
- Monitor Repair
- Computer Repair
- Disk Repair

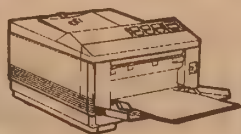
### LaserJet 4L



HEWLETT  
PACKARD

- 300dpi & 4 pages per minute
- PCL 5 & 26 scalable fonts
- 100 sheets adjustable tray
- Memory enhancement technology

**\$669**



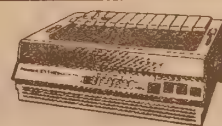
|                          |                          |
|--------------------------|--------------------------|
| DeskJet 500.....\$299    | LaserJet 4ML.....\$999   |
| DeskJet 500C.....\$399   | LaserJet 4si.....\$2985  |
| DeskJet 550C.....\$599   | ScanJet IIP.....\$739    |
| DeskJet 1200C.....\$1349 | ScanJet IIC.....\$1345   |
| LaserJet IIIp.....\$839  | PaintJet.....\$695       |
| LaserJet 4.....\$1349    | PaintJetXL.....\$1645    |
| LaserJet 4M.....\$1849   | PaintJetXL300.....\$2165 |

### EPSON

AP-2250, 9-pin, narrow.....\$119  
AP-3250, 24-pin, narrow.....\$179  
LX-810, 9-pin, narrow.....\$169  
FX-1050, 9-pin, wide.....\$359  
FX-870, 24-pin, narrow.....\$279  
FX1170, 24-pin, wide.....\$359  
LQ-570+, 24-pin, narrow.....\$239  
LQ-870, 24-pin, narrow.....\$469  
LQ-1070, 24-pin, wide.....\$359  
LQ-1170, 24-pin, wide.....\$599  
AP-1000, 300dpi, 6ppm.....\$629  
EPL-8000, 300dpi, 10ppm.....\$869

### IBM / HP / EPSON / ARCHE Notebooks....\$CALL FOR BEST PRICES\$

**Panasonic**  
Office Automation



|                     |                     |
|---------------------|---------------------|
| KX-P1123.....\$185  | KX-P4410.....\$569  |
| KX-P1124i.....\$255 | KX-P4430.....\$669  |
| KX-P2023.....\$189  | KX-P4450i.....\$999 |
| KX-P2123.....\$235  | KX-P4455.....\$1665 |
| KX-P2124.....\$315  | KX-PCK11.....\$45   |
| KX-P2180.....\$159  | KX-PT12.....\$50    |
| KX-P1624.....\$345  | KX-P37.....\$95     |
| KX-P2624.....\$369  |                     |

#### 386SX-33

\*386SX-33 CPU  
\*1-16MB RAM (70ns)  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$269**

#### 386DX-33/40

\*386DX-33/40 CPU  
\*1-32MB RAM (70ns)  
\*128K CACHE  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$289/\$299**

#### 486SX-25

\*Intel 486SX-25 CPU  
\*1-128MB RAM (70ns)  
\*128K CACHE  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$409**

#### 486DX-33

\*Intel 486DX-33CPU  
\*1-128MB RAM (70ns)  
\*256K CACHE  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$599 ISA**  
**\$629 VESA**  
**\$719 EISA/VESA**

#### 486DX-50

\*Intel 486DX-50 CPU  
\*1-128MB RAM (70ns)  
\*256K CACHE  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$739 ISA**  
**\$759 VESA**  
**\$849 EISA/VESA**

#### 486DX2-66

\*Intel 486DX2-66 CPU  
\*1-128MB RAM (70ns)  
\*256K CACHE  
\*AMI BIOS  
\*Teac 1.2 or 1.44 FDD  
\*IDE FD/HD CTL  
\*2S\1P\1G ports  
\*101-key keyboard

**\$809 ISA**  
**\$829 VESA**  
**\$919 EISA/VESA**

1 Year Parts/ 2 years  
Labor Warranty

**High Quality, Full Compatibility And Reliability Are Guaranteed!**

9/07/93

### Monitors

|                       |                          |
|-----------------------|--------------------------|
| NEC 4FGe.....\$699    | EYE Q .28 SVGA.....\$259 |
| NEC 5FGe.....\$1099   | EYE Q N-I SVGA.....\$289 |
| SONY 1430s.....\$599  | NEC 6FG.....\$2399       |
| SONY 1604s.....\$929  | Viewsonic 6E.....\$319   |
| SONY 1730.....\$989   | Viewsonic 15.....\$539   |
| SONY 2036s.....\$1995 | Viewsonic 17.....\$1119  |
| NEC 3FGe.....\$579    | Viewsonic 20.....\$1799  |
|                       | Nanao F 550i.....\$1079  |
|                       | Nanao T560i.....\$1695   |
|                       | Nanao T660i.....\$2595   |

### Video Adapters

|                               |                                          |
|-------------------------------|------------------------------------------|
| OAK 800X600 VGA.....\$39      | ATI GraphicUltra Pro 2MB/VLB.....\$359   |
| Trident 1024 W/1MB.....\$65   | Orchid Fahrenheit 24X 1MB.....\$155      |
| Tseng Labs 1024 1MB.....\$85  | Orchid Fahrenheit VLB 1MB.....\$159      |
| Genoa VLB 1MB.....\$115       | Orchid P9000 VLB 3MB.....\$369           |
| Cirrus Logic VLB 1MB.....\$95 | Diamond Viper VLB VRAM 2MB.....\$3999    |
|                               | Diamond Stealth 24 VLB 1MB.....\$179     |
|                               | Stealth Pro VRAM 1MB/2MB.....\$269/\$369 |

### Hard Drives

|                            |                              |
|----------------------------|------------------------------|
| Conner 80MB IDE.....\$159  | Maxtor 245MB IDE.....\$239   |
| Conner 120MB IDE.....\$165 | Maxtor 345MB IDE.....\$299   |
| Conner 170MB IDE.....\$179 | Maxtor 345MB SCSI.....\$359  |
| Conner 254MB IDE.....\$229 | Maxtor 540MB IDE.....\$779   |
| Maxtor 130MB IDE.....\$179 | Maxtor 540MB SCSI.....\$799  |
| Maxtor 213MB IDE.....\$219 | Fujitsu 1.2GB SCSI.....\$999 |
|                            | Toshiba 1.2GB SCSI.....\$999 |

### Modems

Zoltrix 24/96i FaxModem.....\$49  
Zoltrix 144 int FaxModem.....\$149  
Intel Satisfaxtion 300.....\$249  
Intel Satisfaxtion 350.....\$319  
Intel Satisfaxtion 400.....\$399  
US Robotics.....\$Call

### Controllers

Adaptec 1522k scsi.....\$159  
Adaptec 1542ck scsi.....\$249  
Caching IDE VLB.....\$169  
DTC 3280 scsi w/kit.....\$119  
FD TMC 1660 w/kit.....\$219  
Ultrastor34f scsi VLB\$289

### Misc

SummaSketchIII 12x12\$279  
Logitech Scanman 32.....\$129  
Accessories.....\$Call  
Softwares.....\$Call  
Tape Backup.....\$Call  
Memory.....\$Call

**Sunnyvale**

1082 E. El Camino #3  
(Btw Lawrence & Henderson)  
**(408) 985-1309**

MON-FRI 9AM-6PM

SAT 10AM-5PM

Financing Available  
Corporate Inquiry Welcome



Prices & Specs  
Subject to Changes  
w/o Notice

Advertised Prices  
Based On 2% Cash  
Purchased Discount

**Palo Alto**

454A California Avenue  
(Btw El Camino & Alma)  
**(415) 321-9288**



Best Prices! Best Quality! Best Service!

CALL FOR UPDATED PRICES

# LAITRON COMPUTER WEEKLY SPECIALS

## 486DX2-66/256

- ♦NICE 2 VLB OR AIR 3 VLB
- ♦Intel 80486DX2-66 CPU w/fan
- ♦AMI BIOS
- ♦8MB RAM 70ns
- ♦Teac 1.2MB Floppy Drive
- ♦Teac 1.44 MB Floppy Drive
- ♦PROMISE IDE/IO VLB
- ♦340MB IDE HD
- ♦Focus 9000 128-key Keyboard
- ♦Diamond Stealth VLB w/1MB
- ♦ADI 4G 15" 1280X1024 Monitor
- ♦Medium Tower Case
- ♦250-Watt Power Supply

**\$2145**

## 486DX2-66/256

- ♦Orchid 2 VESA Local Bus
- ♦Intel 80486DX2-66 CPU w/fan
- ♦AMI BIOS
- ♦8 MB RAM 70ns
- ♦Teac 1.2 MB Floppy Drive
- ♦Teac 1.44 MB Floppy Drive
- ♦PROMISE IDE/IO VLB
- ♦AT I/O 2S/1P/1G
- ♦340MB IDE HD
- ♦Focus 9000 128-key Keyboard
- ♦Orchid VA805 VLB w/1MB
- ♦ADI 4G 15" 1280X1024 Monitor
- ♦Medium Tower
- ♦250-Watt Power Supply

**\$2145**

## 486DX-33/128K

- ♦2 VESA Local Bus Board
- ♦Intel 80486DX-33 CPU
- ♦AMI BIOS
- ♦4MB RAM 70ns
- ♦Teac 1.2MB Floppy Drive
- ♦Teac 1.44MB Floppy Drive
- ♦IDE/IO 2FD/2HD/2S/1P/1G
- ♦32-bit Local Bus
- ♦250MB IDE HD
- ♦Mitsumi 101-key Keyboard
- ♦VLB VIDEO with 1MB
- ♦1024x768 .28dp SVGA Monitor
- ♦Mini Tower Case
- ♦230-Watt Power Supply

**\$1265**

## 386DX- 40/128K

- ♦AMD 80386DX-40 CPU
- ♦AMI BIOS & MATH-Co Socket
- ♦Internal Clock Battery
- ♦4 MB RAM 70ns
- ♦1.2 MB Floppy Drive
- ♦1.44 MB Floppy Drive
- ♦IDE 2FD/2HD Controller
- ♦AT I/O 2S/1P/1G
- ♦Conner 170MB 16ms IDE HD
- ♦Mitsumi 101-key Keyboard
- ♦Trident SVGA with 512K
- ♦SVGA .28dp VGA Monitor
- ♦DESKTOP Case
- ♦200-Watt Power Supply

**\$879**

### CD-ROM SOFTWARE

|                                              |      |
|----------------------------------------------|------|
| American Business Phone Book '92.....        | \$23 |
| Animals v. 1.0(DOS).....                     | \$18 |
| Arthur's Teacher Trouble.....                | \$23 |
| Battle Chess (DOS).....                      | \$18 |
| Bus & Econ Atlas (DOS).....                  | \$22 |
| Carmen San Diego (DOS).....                  | \$21 |
| CD Bame Goes To Space.....                   | \$25 |
| CD Game Pack II (DOS).....                   | \$23 |
| CD Storytime (DOS).....                      | \$17 |
| Chess Master 3000 (MPC).....                 | \$18 |
| Compton's Encyclopedia (MPC).....            | \$60 |
| Compton's Family Encyclopedia.....           | \$50 |
| Desert Storm (MPC/Mac).....                  | \$19 |
| Dictionary of the Living World.....          | \$29 |
| Dinosaur Adventure.....                      | \$23 |
| Dr. Window Shareware.....                    | \$19 |
| Dr. Game Shareware.....                      | \$19 |
| Dr. Music Shareware.....                     | \$19 |
| Dr. Share Ware.....                          | \$19 |
| Electronic Library of Art v.1 (DOS).....     | \$27 |
| Electronic Home Library.....                 | \$18 |
| Family Choice/Britannica.....                | \$25 |
| Family Doctor (DOS/Mac).....                 | \$22 |
| Family Education Collections (DOS).....      | \$19 |
| FontMaster I or FontMaster II.....           | \$25 |
| Futura Games.....                            | \$21 |
| Great Cities of the World vol. 1/2(DOS)..... | \$19 |
| Guinness Disk of Records (MPC) '93.....      | \$22 |
| Illustrated Works of Shakespeare.....        | \$27 |
| Jones in Fast Lane (MPC).....                | \$16 |
| King's Quest V (DOS).....                    | \$16 |
| Koda Photo CD.....                           | \$16 |
| Library of the Future 1st ed. (DOS).....     | \$45 |
| Loom from Lucas Film (DOS).....              | \$16 |
| Macmillan Dictionary for Children.....       | \$29 |
| Magazine Rack.....                           | \$35 |
| Manhole.....                                 | \$40 |
| Mario's Missing/World Atlas.....             | \$17 |
| Mavis Teaches Typing (MPC).....              | \$19 |
| Mayo Clinic.....                             | \$22 |
| Media Clips 1 Pak (MPC/Mac).....             | \$38 |
| Media Clips-Jets & Props (MPC).....          | \$19 |
| Media Clips-Wild Places (DOS).....           | \$12 |
| Mantis Express Fighter.....                  | \$14 |
| Microsoft Bookshelf '93 (MPC).....           | \$50 |
| Microsoft Works (MPC).....                   | \$50 |
| MIDI Music Shop.....                         | \$18 |
| Mirror Mirror.....                           | \$22 |
| Mixed-Up Mother Goose (MPC).....             | \$19 |
| Monkey Island (DOS).....                     | \$22 |
| Musical Instruments.....                     | \$69 |
| Nat'l Geographics Mammals (DOS).....         | \$22 |
| National Parks.....                          | \$25 |

### CD-ROM SOFTWARE

|                                          |      |
|------------------------------------------|------|
| Ocean Digital Imagery v. 1 (DOS).....    | \$33 |
| Oldies But Goodies.....                  | \$22 |
| PC-SIG 12th ed. (DOS).....               | \$28 |
| Peter and the Wolf (MPC).....            | \$15 |
| Playing with Language - (E/F/G/J/S)..... | \$23 |
| Publish It! v. 2.0 (DOS).....            | \$22 |
| Roger Ebert's Movie Companion.....       | \$40 |
| Secret Weapons of Luftwaffe (DOS).....   | \$19 |
| Seventh Guest-Virgin Games.....          | \$55 |
| Sherlock Holmes (DOS).....               | \$16 |
| Sleeping Beauty.....                     | \$24 |
| So Much Shareware! I (DOS).....          | \$12 |
| So Much Shareware! II (DOS).....         | \$15 |
| So Much Shareware! III (DOS).....        | \$22 |
| Sound Library (MPC).....                 | \$20 |
| Space Series Apollo.....                 | \$40 |
| Stellar 7 (DOS).....                     | \$16 |
| Swim Wear 1993.....                      | \$26 |
| The Beauty & The Beast (MPC).....        | \$15 |
| TIME Almanac 1991 (DOS).....             | \$22 |
| TIME Table of History (DOS).....         | \$16 |
| Toolworks Encyclopedia (MPC).....        | \$48 |
| Total Baseball (DOS/Mac).....            | \$18 |
| True Type Explosion Fonts.....           | \$27 |
| U.S. Atlas & Automap (DOS).....          | \$24 |
| U.S. History (DOS/Mac).....              | \$22 |
| USA Wars: Korea.....                     | \$28 |
| US/World Atlas Pack.....                 | \$29 |
| USA Wars: Vietnam (DOS/Mac).....         | \$28 |
| USA Wars: World War II (DOS/Mac).....    | \$28 |
| Variety Store.....                       | \$21 |
| VGA Spectrum Sound Library.....          | \$18 |
| Vital Signs (MPC/Mac).....               | \$93 |
| Wing Commander/Ultima VI (DOS).....      | \$21 |
| Winware! vol. 3.....                     | \$18 |
| Wiz-Pak Shareware.....                   | \$18 |
| Woman of Venus.....                      | \$28 |
| World of Flight.....                     | \$30 |
| World Atlas v. 3.2 (MPC).....            | \$15 |
| World of Trains.....                     | \$30 |
| World View (DOS).....                    | \$13 |
| World Vista.....                         | \$35 |

CALL FOR ADULT TITLES & MORE

### CD-ROM

|                                  |             |
|----------------------------------|-------------|
| NEC CD-ROM 84/74(280ms).....     | \$390/\$570 |
| MITSUMI CD-ROM(350ms)W/Card..... | \$170       |
| PANASONIC CR-562(300KB/SEC)..... | \$230       |
| PANASONIC CR-522.....            | \$195       |
| TOSHIBA 3401 INT/EXT.....        | \$379/\$479 |

### MONITORS

|                                     |           |
|-------------------------------------|-----------|
| ADI 4G 15" .28dp 1280x1024.....     | \$410     |
| CTX 14" SVGA 1024X768 .28 Int.....  | \$245     |
| CTX 14" SVGA 1024x768 28 N-I.....   | \$263     |
| Hitachi CM-2095.....                | \$1280    |
| Hitachi CM-2187M+.....              | \$2080    |
| Mag 15F 15" .26dp.....              | \$490     |
| Mag 17F 17" .26dp/OEM.....          | \$916/845 |
| Mitsubishi HL6955SETK20" .31dp..... | \$1720    |
| Mitsubishi Diamond Pro 17" .26..... | \$1065    |
| Nanao 340iw.....                    | \$653     |
| Nanao F550iw.....                   | \$1066    |
| Nanao T560i.....                    | \$1635    |
| Nanao T660i.....                    | \$2395    |
| Nanao F750i.....                    | \$2025    |
| NEC 3FGe.....                       | \$572     |
| NEC 4FGe.....                       | \$672     |
| NEC 5FGe.....                       | \$1070    |
| NEC 6FG.....                        | \$2295    |
| Sony CPD-1304.....                  | \$516     |
| Sony CPD-1604.....                  | \$888     |
| Sony CPD-1430.....                  | \$560     |
| Sony CPD-1730.....                  | \$964     |
| Viewsonic 4E.....                   | \$264     |
| Viewsonic 5+.....                   | \$365     |
| Viewsonic 5E.....                   | \$353     |
| Viewsonic 6E.....                   | \$284     |
| Viewsonic 7.....                    | \$860     |
| Viewsonic 15.....                   | \$496     |
| Viewsonic 17.....                   | \$1040    |
| Viewsonic 20.....                   | \$1645    |
| Monochrome 14".....                 | \$92      |
| Monochrome VGA 14".....             | \$108     |
| VGA 14" .51dp.....                  | \$174     |
| SVGA 14" .39dp.....                 | \$194     |
| SVGA 14" .28dp.....                 | \$237     |
| SVGA 14" .28dp Non-Interlaced.....  | \$260     |

### PRINTERS

|                                   |              |
|-----------------------------------|--------------|
| Brother HJ400 INKJET(MAG&PC)..... | \$290        |
| Canon BJ-200.....                 | \$290        |
| Citizen GX130 Color 24 Pin.....   | \$195        |
| Citizen GX200.....                | \$135        |
| HP DeskJet 500/500C.....          | \$320/\$420  |
| HP DeskJet 550C.....              | \$585        |
| HP LaserJet 4/4L.....             | \$1330/\$685 |
| HP PaintJet.....                  | \$699        |
| Oki Data OL400.....               | \$495        |
| Panasonic 1123.....               | \$168        |
| Panasonic 1124i.....              | \$238        |
| Panasonic 2123.....               | \$218        |
| Panasonic 2150.....               | \$140        |
| Panasonic 4410.....               | \$560        |
| Color Kit.....                    | \$45         |

### HARD & FLOPPY DRIVES

|                                            |        |
|--------------------------------------------|--------|
| Conner CP30104 120MB 16ms IDE.....         | \$160  |
| Conner CP30174 170MB 16ms IDE.....         | \$170  |
| Conner CP30204 212MB 12ms IDE.....         | \$210  |
| Conner CP30254 250MB 14ms IDE.....         | \$220  |
| Conner CP30544 540MB <12ms IDE.....        | \$540  |
| Fujitsu M2622T 330MB 12ms IDE.....         | \$390  |
| Fujitsu M2623T 425MB 12ms IDE.....         | \$490  |
| Fujitsu M2624T 520MB 12ms IDE.....         | \$630  |
| Maxtor MXT1240S 1.2GB 8.5ms SCSI.....      | \$1090 |
| Maxtor 7213AT 213MB 15ms IDE.....          | \$210  |
| Maxtor 7245AT 245MB 15ms IDE.....          | \$220  |
| Maxtor 7345A 340MB 13ms IDE.....           | \$285  |
| Maxto MXT540 535MB 8.5ms IDE.....          | \$730  |
| Quantum LPS240 240MB 15ms IDE.....         | \$219  |
| Quantum LPS525AT 525MB 12ms IDE.....       | \$555  |
| Western Digital WD2200 212MB 14ms IDE..... | \$191  |
| Western Digital WD2250 250MB 14ms IDE..... | \$215  |
| Western Digital WD2340 340MB 13ms IDE..... | \$275  |
| Western Digital WD2420 420MB 12ms IDE..... | \$395  |
| Conner 1.37 GB SCSI.....                   | \$930  |
| Fujitsu M2623SA 425MB 11ms SCSI.....       | \$630  |
| Fujitsu M2624F 520MB 11ms SCSI.....        | \$670  |
| Fujitsu M2694SA 1.2GB 10ms SCSI.....       | \$900  |
| Fujitsu M2652SA 2.0GB 11ms SCSI.....       | \$1800 |
| Fujitsu M2654SA 2.4GB 12ms SCSI.....       | \$2200 |
| Quantum LPS525S 525MB 13ms SCSI.....       | \$620  |
| Quantum 1.2 GB.....                        | \$910  |
| Toshiba 1.2GB 12ms 512K Cache SCSI-2.....  | \$920  |
| Teac 1.2MB Floppy Drive.....               | \$53   |
| Teac 1.44MB Floppy Drive.....              | \$50   |

### VIDEO CARDS

|                                            |             |
|--------------------------------------------|-------------|
| ATI Pro 1MB/2MB(ISA).....                  | \$244/\$320 |
| ATI Pro 1MB/2MB(VLB).....                  | \$256/\$335 |
| ATI Pro 1MB/2MB(EISA).....                 | \$300/\$380 |
| ATI Graphics Ultra Plus 1MB/2MB.....       | \$210/\$256 |
| ATI Graphics Ultra w/1MB & Mouse.....      | \$184       |
| Cirrus Logic w/1MB.....                    | \$58        |
| Cirrus Logic VLB w/1MB.....                | \$92        |
| Diamond Speedstar 24 w/Hi-Color & 1MB..... | \$139       |
| Diamond Stealth 24 VLB w/1MB.....          | \$160       |
| Diamond Stealth Pro VRAM w/2MB.....        | \$340       |
| Diamond Stealth Viper VLB w/2MB.....       | \$365       |
| Genoa 8500 VLB w/1MB.....                  | \$105       |
| Orchid Fahrenheit VA801 w/Sound.....       | \$142       |
| Orchid Fahrenheit VLB w/1MB.....           | \$146       |
| Orchid ProDesigner IIS w/1MB.....          | \$109       |
| Orchid P9000 VLB w/3MB.....                | \$340       |
| Orchid Celsius VLB VLB 1MB/2MB.....        | \$240/\$320 |
| Trident 9000A w/256K.....                  | \$31        |
| Trident 9000A w/512K.....                  | \$38        |
| Trident 8900C/8900CL w/1MB.....            | \$58        |



Best Prices!

Best Quality!

Best Service!

CALL FOR UPDATED PRICES

## LAITRON COMPUTER WEEKLY SPECIALS

## Multimedia

## 486SX-25/128K

- 2 VESA Local Bus Board
- Intel 80486SX-25CPU
- Toshiba XM-3401 CD-ROM
- Pro Audio Spectrum 16
- 4MB RAM 70ns
- Teac 1.2 & 1.44 Floppy Drive
- IDE/IO 2FD/2HD/2S/1P/1G
- Western Digital 250MB IDE HD
- Mitsumi 101-key Keyboard
- Cirrus Logic VLB SVGA w/1MB
- 1024x768 .28dp SVGA Monitor
- Medium Tower Case
- 250-Watt Power Supply

\$1645

## Multimedia

## 386DX-40/128K

- AMD 386DX-40 CPU
- Sound Blaster Pro Sound Card
- Panasonic CR522 CD-ROM
- Deluxe Speaker
- 4MB RAM 70ns
- 1.2 & 1.44 Floppy Drive
- IDE/IO 2FD/2HD/2S/1P/1G
- Conner 170MB Hard Drive
- Mitsumi 101-key Keyboard
- Cirrus Logic SVGA w/1MB
- 1024x768 .28dp SVGA Monitor
- Mini Tower Case
- 230-Watt Power Supply

\$1245

Notebook  
Twinhead  
486DX-33T

- 4MB RAM, Exp. To 20MB
- 130MB HD (200 MB Available)
- 1.44MB Floppy Drive
- 256-color Active Color Matrix
- 2S/1P/1G
- One External SVGA Port
- One External FD Port
- One 100-Pin Expansion Port
- One External Keyboard Port
- 120/240V AC/DC Adapter
- Internal Trackball

\$3695

Notebook  
Matador  
486DX2-66

- 4MB RAM, Exp. To 20MB
- 120MB HD (200 MB Available)
- 1.44MB Floppy Drive
- 256-color Active Color Matrix
- 2S/1P/1G
- One External SVGA Port
- One External FD Port
- One 110-Pin Expansion Port
- One External Keyboard Port
- 120/240V AC/DC Adapter
- Internal Trackball

\$4095

## KEYBOARDS

|                          |      |
|--------------------------|------|
| Focus 2001               | \$36 |
| Focus 9001               | \$58 |
| Keytronic 101-Key        | \$30 |
| Maxiswitch 101-Key       | \$28 |
| Metek K208 101-Key       | \$22 |
| Metek K104 101-Key Click | \$42 |
| Mitsumi 101-Key          | \$26 |
| Northgate OmniKey 101    | \$68 |
| Northgate OmniKey 102    | \$68 |
| Northgate OmniKey Ultra  | \$92 |

## CONTROLLER CARDS

|                                     |             |
|-------------------------------------|-------------|
| IDE 4FD/2HD                         | \$34        |
| IDE 2FD/2HD/2S/1P/1G                | \$14        |
| Future Domain IDE 2HD/2D & SCSI     | \$60        |
| DTC 2290 EISA IDE                   | \$135       |
| Promise DC-99M IDE w/512K Cache     | \$115       |
| Promise DC-100 IDE Cache with I/O   | \$125       |
| Promise DC-200 IDE Cache w/4HD/2FD  | \$125       |
| Promise DC-4030 VLB IDE Cache w/4HD | \$175       |
| Promise IDE/IO VLB                  | \$45        |
| Teco Cache VLB IDE w/4HD/2FD        | \$175       |
| Adaptec 1522/1522K SCSI             | \$98/\$138  |
| Adaptec 1542C/1542CK SCSI           | \$186/\$233 |
| Adaptec 2742 EISA SCSI              | \$360       |
| BusLogic BT445S VLB SCSI-II         | \$268       |
| BusLogic BT545KT BusMaster SCSI     | \$235       |
| BusLogic BTB742KT EISA SCSI-II Kit  | \$266       |
| BusLogic BTB747AK EISA SCSI         | \$380       |
| DTC 3290AS EISA SCSI                | \$430       |
| Future Domain TMC950 SCSI w/IDE     | \$55        |
| Ultrastor 24F EISA SCSI             | \$365       |
| Ultrastor 34F VLB SCSI              | \$265       |

## MOTHERBOARDS W/CPU

|                                  |       |
|----------------------------------|-------|
| Asus 486DX-50/256K w/2VLB        | \$560 |
| Asus 486DX2-66/256K w/2VLB       | \$650 |
| Diamond 486DX2-66/256K w/2 VLB   | \$715 |
| IBM SL2C-66                      | \$350 |
| Nice 486DX2-66/256K EISA/VLB     | \$748 |
| Nice 486DX-50/256K EISA/VLB      | \$680 |
| Nice 486DX-33/256K EISA/VLB      | \$540 |
| Orchid 486DX2-66/256K w/2 VLB    | \$695 |
| Orchid 486DX-50/256K w/2 VLB     | \$645 |
| MicroStar 486DX2-66/128K w/2 VLB | \$605 |
| 486DX-33/64K w/2 VLB             | \$385 |
| 486DX2-66/256K                   | \$615 |
| 486DX-50/256K                    | \$525 |
| 486DX2-50/256K                   | \$485 |
| 486DX-33/64K (Intel CPU)         | \$365 |
| 486DLC-40/64K                    | \$195 |
| 386DX-40/128K                    | \$122 |
| 386SX-33                         | \$85  |

## POWER SUPPLY &amp; CASE

|                                     |       |
|-------------------------------------|-------|
| 200W Power Supply                   | \$35  |
| 230W Power Supply                   | \$40  |
| 250W Power Supply                   | \$55  |
| 300W Power Supply                   | \$65  |
| Desktop AT Case w/200W Power Supply | \$54  |
| Mini-Tower Case w/200W Power Supply | \$51  |
| Medium Tower Case w/250WPS          | \$82  |
| Full-Size Tower case w/250WPS       | \$112 |
| Super Tower Case w/300WPS           | \$190 |

## SOFTWARE

|                                           |               |
|-------------------------------------------|---------------|
| Central Point Anti-Virus                  | \$15          |
| Lotus 1-2-3 for Windows                   | \$290         |
| Microsoft DOS 5.0 (w/System Purchase)     | \$45          |
| Microsoft Excel 4.0 for Windows           | \$265         |
| Microsoft Office 3.0 for Windows          | \$460         |
| Microsoft Project 3.0 for Windows         | \$410         |
| Microsoft Word for Windows                | \$265         |
| Microsoft Works for Windows               | \$65          |
| Microsoft Windows 3.1 (w/System Purchase) | \$45          |
| SCO C++                                   | \$900         |
| SCO ODT Dev. System 2.0/Tape              | \$1460/\$1240 |
| SCO Personal System 2.0/Tape              | \$1155/1050   |
| SCO XENIX-NET 386 Single Server V1.3.0    | \$670         |
| SCO UNIX 386 Dev. System V3.2.4           | \$885         |
| SCO UNIX 386 GTV3.2.4 Multiuser           | \$885         |
| SCO XENIX 386 Dev. System V2.3.1          | \$585         |
| SCO XENIX 386 GTV2.3.4 Multiuser          | \$640         |
| Wordperfect 5.1 (DOS)                     | \$250         |
| Wordperfect 5.2 for Windows               | \$260         |

## MULTIMEDIA

|                                           |        |
|-------------------------------------------|--------|
| Creative Labs MIDI Kit                    | \$42   |
| Creative Labs SoundBlaster Delex          | \$82   |
| Creative Labs SoundBlaster Pro Deluxe     | \$119  |
| Creative Labs SoundBlaster 16 ASP         | \$194  |
| Creative Labs VideoBlaster                | \$306  |
| Creative Labs WaveBlaster                 | \$230  |
| Logitech Sound Man                        | \$140  |
| Media Vision Pro 16                       | \$120  |
| Media Vision Pro Audio Spectrum 16        | \$148  |
| Media Vision Pro Audio Studio 16          | \$205  |
| Media Vision Pro Movie Spectrum           | \$265  |
| Creative Labs Discovery CD 8 Upgrade Kit  | \$380  |
| Creative Labs Discovery CD 16 Upgrade Kit | \$460  |
| Creative Labs Edutainment 16 CD Upgrade   | \$525  |
| Media Vision Pro 16 Multimedia System     | \$810  |
| Media Vision Subsystem CDPC XL            | \$1065 |
| Media Vision Fusion CD 16                 | \$470  |
| NEC Multimedia Upgrade Kit                | \$800  |
| Labtec Speakers                           | \$25   |
| Zoltrix Deluxe Speakers                   | \$15   |

## MODEMS

|                                            |       |
|--------------------------------------------|-------|
| DataSystem Pocket Size 14400 Fax/Modem     | \$205 |
| DataSystem External 14400 Fax/Modem        | \$175 |
| DataSystem 14400 Fax/Modem w/16550         | \$160 |
| Zoltrix 2400 Internal Modem w/send fax     | \$27  |
| Zoltrix 9600/2400 Internal Fax/Modem       | \$48  |
| Zoltrix 9600/2400 Int. Fax/Modem (Windows) | \$57  |
| Zoltrix 14400 Internal Fax/Modem           | \$148 |
| Zoltrix 14400 External Fax/Modem           | \$173 |
| US Robotics 14400/14400 Int. Fax/Modem     | \$173 |
| US Robotics 14400/14400 Ext. Fax/Modem     | \$185 |

## TAPE BACKUP

|                                            |        |
|--------------------------------------------|--------|
| 3M DC2120 Tape                             | \$18   |
| Colorado AB-11 External Tape Port          | \$38   |
| Colorado DJ-10 120MB Tape Backup           | \$138  |
| Colorado DJ-20 250MB Tape Backup           | \$178  |
| Colorado FC-10 Tape Backup Controller      | \$85   |
| Colorado KE-09 External Kit w/o Controller | \$63   |
| Colorado TC-15 Controller w/Compression    | \$185  |
| Colorado PT-252GB Int. Tape Backup         | \$970  |
| Colorado PT-25E 2GB Ext. Tape Backup       | \$1115 |
| Colorado PT-50 4GB Int. Tape Backup        | \$1485 |
| Colorado PT-50E 4GB Ext. Tape Backup       | \$1635 |
| Colorado Trakker 120MB Ext. Tape Backup    | \$295  |
| Colorado Trakker 250MB Ext. Tape Backup    | \$392  |
| Iomega 250MB Insider Int. Tape Backup      | \$205  |
| Summit SE250 250MB Int. Tape Backup        | \$170  |

## MICE

|                                |      |
|--------------------------------|------|
| Impression 3-Button Mouse      | \$18 |
| Logitech First Mouse           | \$35 |
| Logitech Mouseman              | \$56 |
| Logitech Mouseman (Cordless 2) | \$88 |
| Logitech Trackman              | \$75 |
| Microsoft Mouse                | \$41 |
| MS Compatible Mouse            | \$10 |

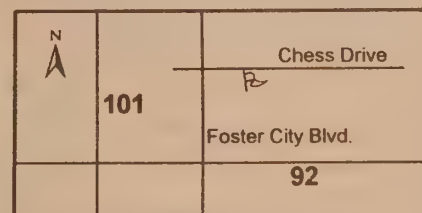
## MEMORY &amp; CHIPS

|                      |                                          |
|----------------------|------------------------------------------|
| 1 MBx9 SIMM 60ns     | \$45                                     |
| 1 MBx9 SIMM 70ns     | \$42                                     |
| 4 MBx9 SIMM 60ns     | \$155                                    |
| 4 MBx9 SIMM 70ns     | \$148                                    |
| 1 MBx36 SIMM 70ns    | \$179                                    |
| 2 MBx36 SIMM 70ns    | \$345                                    |
| 4 MBx36 SIMM 70ns    | \$650                                    |
| Cyrix 387DX-40       | \$65                                     |
| Cyrix 387DX-33/25    | \$62                                     |
| Cyrix 387SX-25/20/16 | \$62                                     |
| Intel 80387DX-33/25  | \$75                                     |
| Intel 80387SX-25/16  | \$70                                     |
| CPU's & Memory       | Please call for new daily updated prices |

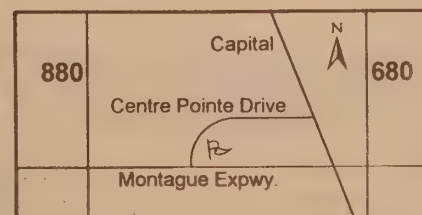
LAITRON  
COMPUTER

## HOURS:

9:00 AM TO 6:30 PM M-F  
10:00 AM TO 4:00 PM SAT



1169 Chess Drive, Suite E  
Foster City, CA 94404  
Tel: (415)578-8998  
Fax: (415)578-8880



1646 Centre Pointe Drive  
Milpitas, CA 95035  
Tel: (408)945-1411  
Fax: (408)945-1075

## Terms &amp; Conditions:

- Nationwide on-site service available
- Prices and availability subject to change without notice
- Shipping, COD, & insurance are extra and not refundable
- Prices reflect cash discount
- All returns must have prior authorization
- All returns must be in original packaging complete with manual, software, etc.
- 15% restocking charge
- Not responsible for typos on this ad



# MICROTECH

*International*

Serving You  
Since 1986

|        |                                          |        |       |
|--------|------------------------------------------|--------|-------|
| Z      | To Berkeley                              |        |       |
| Hwy 80 | Powell<br>To San Francisco<br>Bay Bridge | Hollis | Doyle |

Centrally located—15 min from San Francisco  
5 min from Oakland—5 min from Berkeley

## HEWLETT-PACKARD

### HP LaserJet 4

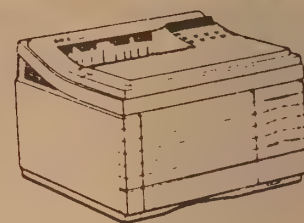
FOR PC/WINDOWS USERS

Give your office the advantages of superior looking documents with this printer's stunning 600-dpi resolution and wide assortment of built-in scalable typefaces. It also offers paper handling flexibility that can translate into real productivity gains for your office. Automatic switching between three ACTIVE I/Os makes it easy to share its outstanding print quality among several users.

### HP LaserJet 4<sup>m</sup>

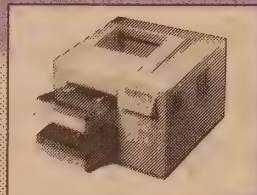
FOR MAC/PC Environment

This printer sets a new standard in business printing for Macintosh and mixed Mac/PC environments. With 600-dpi resolution, it produces near-typeset-quality documents. Integrated PostScript Level 2 software from Adobe gives users access to 35 Type 1 typefaces, and they can download thousands more. Automatic printer language and I/O switching makes it easy to share the printer between Mac and PC users.



**hp** HEWLETT  
PACKARD  
Authorized Reseller

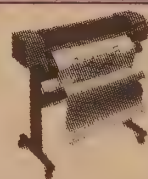
### HP LaserJet 4Si



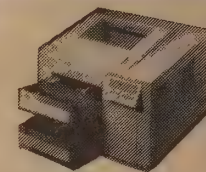
This 17 pages per minute, high-performance, 600dpi network printer offers the power & performance to meet users' expanding needs. Add interfaces, memory, paper-handling at any time.

### HP Plotters

- HP DesignJet 650C D/E Size Plotters
- HP DraftPro DXL Plotter
- HP DraftPro EXL Plotter
- HP 7475A Color Desktop Plotter
- HP 7550 Plus Color Desktop Plotter

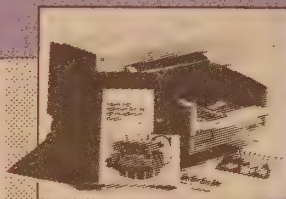


### HP LaserJet 4SiMX



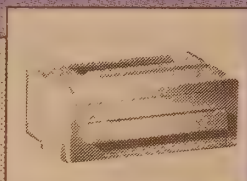
The HP LaserJet 4SiMX is a high-speed, high-volume, high-resolution laser printer designed for multiple network environments. It offers simplicity in complex networking environments.

### PostScript™ Software for the HP DeskWriter Family (HP DeskWriter 550C Version)



Now Mac users who work at home or take work home can afford a genuine PostScript color printing solution. Just combine PostScript™ software for the HP DeskWriter Family and the HP DeskWriter 550C and get the best of the PostScript printing world. Vivid color. Great grayscale. Professional-quality documents. It's an easy-to-use, true PostScript color printing solution for a price so low you'll think you're dreaming.

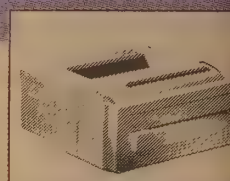
### HP LaserJet 4ML



The HP LaserJet 4ML printer has 4MB RAM, PostScript language and enhanced HP PCL5 with automatic language switching, microfine toner cartridge, 100-sheet multi-purpose tray, power cord and printer drivers.

**\$2099**

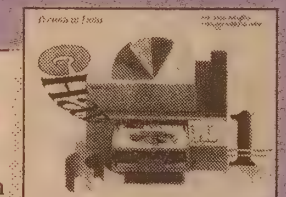
### HP LaserJet 4L



The HP LaserJet 4L printer is everything you want in a laser printer. Complete. Simple to operate. And affordable.

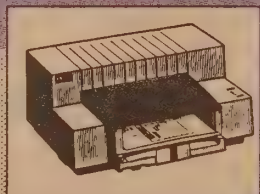
- Up to 4 pages per minute
- 300x300 dpi with further refinement by HP Resolution technology
- 26 Scaleable typefaces

### HP DeskJet 1200C/1200C/PS Printer



- 600x300 dpi black text with Resolution Enhancement Technology
- 300dpi full color printing
- 45 internal scalable typefaces for Windows and MS-DOS®. 35 additional typefaces for PostScript™ printing
- Color PCL5 language and a slot for HP LaserJet typeface cartridges
- 2MB Memory, expandable to 26MB

### HP InkJet Printers For/PC

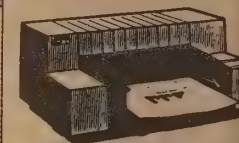


### DeskJet 500/500C/550C

- 3 Year mfg. warranty
- Extremely quiet operation
- 300 dpi printing
- 7 ppm in best mode 550C

**\$299/399/599**

### HP InkJet Printers For Macintosh® Deskwriter/DeskwriterC/Deskwriter 550



- 3 Year mfg. warranty
- Extremely quiet operation
- 300 dpi printing
- 7 ppm in best mode 550C

**\$299/399/599**

100% FINANCING AVAILABLE OAC  
PLEASE CALL STORE FOR DETAILS

Authorized Factory

**hp** HEWLETT  
PACKARD

**COMPAQ**

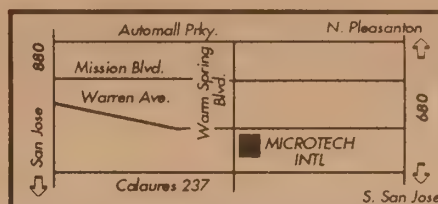


## EMERYVILLE

5865 Doyle Street  
Emeryville, CA 94608  
TEL: (510) 658-1433  
FAX: (510) 658-7339

## FREMONT

47000 Warm Springs Blvd. #8  
Fremont, CA 94539  
TEL: (510) 226-8650  
FAX: (510) 226-8652

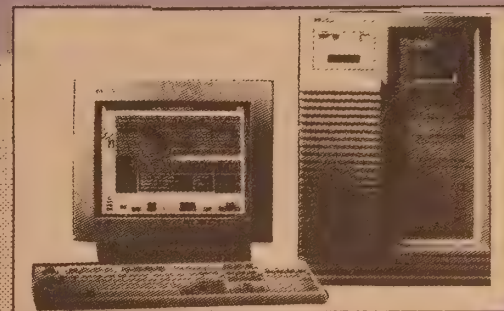


### Hours:

Mon - Fri 9-6  
Closed Sat & Sun  
Closed Fri 1-2  
Fremont Store Open  
Sat. 11-5 thru Dec.

## HP NetServer LM Series:

HP NetServer 4/33 LM • HP NetServer 4d/66 LM • HP NetServer 5/60 LM



To help you control your network, HP has designed its servers to be easy to manage and administer. Every NetServer LM includes HP NetServer Assistant server management software that helps you prevent problems before they occur. Computer-intensive tasks aren't a challenge for HP NetServer LM servers because they offer your choice of the Intel 486 DXX, DX2, or the high-end Pentium™ processor when available. Backed with HP's renowned reliability and support, the HP NetServer LM Series is the safe bet for your high-performance network needs.

### Servers That Deliver:

- Improved manageability with built-in features and software
- Continuous availability through fault tolerant data storage
- High Performance for demanding network tasks
- World-class HP support services and 3-year warranty.



HEWLETT  
PACKARD  
Authorized Reseller

## You Were Wise to Wait

### Introducing the New HP Omnibook 300 Superportable PC

- It's Lightweight --- Only 3 pounds, including built-in mouse.
- It's Compact --- Only 6.4 x 11.1 x 1.4 inches.
- From Complicated to Easy - Fast access keys to save time.
- It's Ready to Go. No waiting for the system to boot, ever.
- Built-in ROM Applications - MS Windows, MS Word for Windows, MS Excel, Appointment Book, Phone Book, HP Calculator, MS File Manager and LapLink Remote Access - Don't use up disk space.
- Mass Storage Options Available - 40MB Hard Disk or 10MB Flash Disk Version
- Optional Plug-in Fax/Modem and Data Communications Application Card.
- **Call Microtech International to find out more about the Superportable from HP**

### We carry the complete line of HP Printer Supplies, Accessories, and Software Utilities.

- Postscript cartridges
- Toner cartridges
- InkJet cartridges
- Network Boards/Cables
- HP Printer Font Cartridges

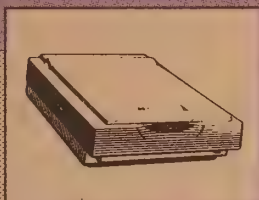
### HP ScanJet Scanners

#### IIP

- Flatbed, monochrome
- 300 dpi resolution
- 256 grayscale levels

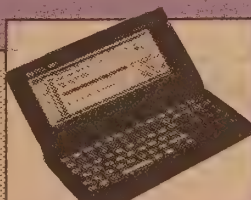
#### IIC

- Monochrome + color images + text
- Recognizes any font
- Manages long documents w/ease



### HP 100LX Palmtop PC

- The only palmtop with built-in cc:Mail and other datacomm.
- The only palmtop that runs DOS-based software off-the-shelf.
- The best PIM Software in a handheld.
- The only palmtop to implement PCMCIA version 2.0.
- It includes a built-in database.



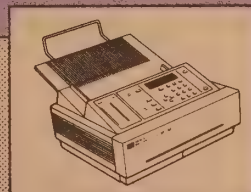
### Call Us For Memory Upgrades On All HP Computers & Printers

### HP Computer/Printer Repair

- On-site/in-house repairs
- Loaners available while we service your equipment\*
- Extended service contracts
- HP authorized technicians
- On-site preventative maintenance. Call for appointment.
- \* Call Store for Details

### HP LaserJet Fax 310

- Plain paper fax machine utilizes your existing last printer.
- 300 dpi resolution
- Auto document feeder capability
- 17 sec/page transmission



### Authorized HP



HEWLETT  
PACKARD

### On-Site

Warranty and Non-warranty  
Service/Repairs

## Service Center for:

TOSHIBA

OKIDATA



Apple

All prices are subject to change without notice.  
Prices good through 10/18/93.  
All brands and product names are  
trademarks of their respective companies.



has only met about 5% of them—the rest are network users near and far. For the past three years, the project has released twice the number of books as the previous year. “This doubling curve will get us to our goal of

10,000 books by 2001,” Hart says.

Obviously, libraries aren’t extinct yet. Although they are a boon for research and searching, electronic texts do have drawbacks for the casual reader. You can’t read

one in the bath, and you might hesitate to tote a portable computer with you on public transit, just to catch the last chapter of *Moby Dick*. Still, Hart is betting on the near future, when storage will be cheap, computers will be even more portable, and screens will be easier to read. By the time the 10,000th e-text rolls off the presses in the year 2001, this will undoubtedly be the case.

One technical problem slowing the release of texts lies in copyright law. Unless given specific permission, Project Gutenberg may only reproduce works that are in the public domain—uncopyrighted. Under current copyright law, works don’t enter the public domain until the author has been dead for 50 years, so don’t expect too many best sellers to be given away on the Internet archives.

Although the idea of giving free books to the masses is an honorable one, will Project Gutenberg’s efforts have a similar effect to Johann Gutenberg’s? Johann’s efforts made inexpensive books available to the general public. Project Gutenberg has made books even less expensive—nearly free, even considering transfer time and storage space. However, for the time being, the general public cannot collect on Project Gutenberg’s promise because those of us with access to home computers and online services are in the minority. Until everyone uses the Internet or has a CD-ROM drive, Project Gutenberg cannot have the impact that Johann Gutenberg’s movable type did over five hundred years ago.

## BOOKS ON CD-ROM

In July, Walnut Creek CD-ROM released a CD-ROM containing all of Project Gutenberg’s current collection of e-texts. The CD-ROM conforms to ISO-9660, which is the most common and generic format. It will work with almost any system. All the files are in plain ASCII, so that they can be used with the widest variety of computers and software.

The price is \$39.95 (plus sales tax in California) plus \$5 shipping and handling per order. For more information, contact Bob Bruce, Walnut Creek CD-ROM, 1547 Palos Verdes, Suite 260, Walnut Creek, CA, 94596. 1-800-786-9907. Or send electronic mail to “orders@cdrom.com”.

The company plans to update the CD-ROM with new e-texts every six months. Updates will be available by subscription. Part of the proceeds from the sale of the disc go to Project Gutenberg to help pay for the creation of new e-texts. The company offers a variety of CD-ROMS—for a list, you can FTP the latest catalog from <ftp.cdrom.com:/cdrom/catalog>, or send email to “info@cdrom.com”. ■

# ACCESSING THE PROJECT GUTENBERG ARCHIVES

For further information, or to retrieve electronic books via FTP (the Internet’s file transfer protocol), anonymous FTP directly to the Project Gutenberg archives: <mrcnext.cso.uiuc.edu> (128.174.201.12). Texts are available in directories sorted by the year of release: *etext/etext91*, *etext/etext92*, and *etext/etext93*. For more information about Project Gutenberg and the current newsletter, look in directory *etext/articles*.

Project Gutenberg files are available from other FTP sites as well: <nptn.org> (192.55.234.52) in */pub/e.texts/gutenberg* <ftp.oes.orst.edu> (128.193.124.2); in */pub/almanac/etext* <quake.think.com> (192.31.181.1); in */pub/etext91* or */pub/etext92* <simtel20.army.mil> or (192.88.110.20); in *pd1:<msdos.books>* <wuarchive.wustl.edu> (128.252.135.4); and in */mirrors/msdos/books*.

The Almanac Information Server, located at Oregon State University, allows text retrieval via electronic mail. To retrieve a file via email, first send the following line by itself to [almanac@oes.orst.edu](mailto:almanac@oes.orst.edu):

### send gutenberg catalog

This will get you instructions on how to send further requests, and will list the available files. For example, to retrieve *Alice’s Adventures in Wonderland*, send to [almanac@oes.orst.edu](mailto:almanac@oes.orst.edu):

### send gutenberg alice

Email questions about Project Gutenberg to: [dircompg@ux1.cso.uiuc.edu](mailto:dircompg@ux1.cso.uiuc.edu).

E-texts released in 1993, in directory */etext/etext93* (check archive site for current filenames—xxx’s denote version numbers which change periodically):

A Princess of Mars [Mars #1] (pmars10x.xxx)  
Aladdin and the Magic Lamp (alad10xx.xxx)  
Anne of the Island (iland10x.xxx)  
Black Experience (Coombs) (blexp10x.xxx)  
Civil Disobedience, Thoreau (civil10x.xxx)  
Clinton’s Inaugural Address (clintonx.xxx)  
Descartes’ Reason Discourse (dcart10x.xxx)  
Email 101 by John Goodwin (email025.xxx)  
Gods of Mars [Mars #2] (gmars10x.xxx)  
LOC Workshop on Etexts (locet10x.xxx)  
Milton’s Paradise Regained (rgain10x.xxx)  
NREN, by Jean Armour Polley (nren210x.xxx)  
Pi (circumference/diameter) (pimil10x.xxx)  
Red Badge of Courage, Crane (badge10x.xxx)  
Surfing the Internet (Surf10xx.xxx)  
The 32nd Mersenne Prime (32pri10x.xxx)  
The Communist Manifesto (manif10x.xxx)  
The Dawn of Amateur Radio (radio10x.xxx)

The First 100,000 Primes (prime10x.xxx)  
The Marvelous Land of Oz (ozland10x.xxx)  
The Number “e” [Natural Log] (ee610xx.xxx)  
The Scarlet Pimpernel (scarp10x.xxx)  
The Square Root of Two (2sqrt10x.xxx)  
The Wonderful Wizard of Oz (wizoz10x.xxx)  
The World Factbook (world192.xxx)  
Thuvia, Maid of Mars [#4] (mmars10x.xxx)  
Tom Sawyer [Wiretap/Twain] (sawyr10x.xxx)  
Warlord of Mars [Mars #3] (wmars10x.xxx)  
What Is Man? Mark Twain (wman10xx.xxx)

### E-texts released in 1992, in directory /etext/etext92

1991 CIA World Factbook (world91a.xxx)  
A Christmas Carol (Dickens) (carol10x.xxx)  
Aesop’s Fables (Advantage) (aesopa10.xxx)  
Anne of Avonlea (avon10xx.xxx)  
Anne of Green Gables (anne10xx.xxx)  
Data From the 1990 Census (uscen901.xxx)  
Dr. Jekyll and Mr. Hyde #1 (hyde10xx.xxx)  
Dr. Jekyll and Mr. Hyde #2 (hydea10x.xxx)  
Far From the Madding Crowd (crowd13x.xxx)  
Frederick Douglass (duglas10.xxx)  
Herland (for Mother’s Day) (hrlnd10x.xxx)  
Hitchhiker Internet Guide (hhgi10xx.xxx)  
New Etext of Bible (KJV) (bible10x.xxx)  
NorthWestNet NUSIRG Guide (nusing10.xxx)  
O Pioneers! Willa Cather (opion10x.xxx)  
Paradise Lost (Raben) (plrabn11.xxx)  
Song of the Lark (Cather) (song10xx.xxx)  
Sophocles’ Oedipus Trilogy (oedip10x.xxx)  
The 1990 US Census (2nd) (uscen902.xxx)  
The Gift of the Magi-O Henry (magi10.txt)  
The Hackers’ Dictionary (jargn10x.xxx)  
The Legend of Sleepy Hollow (sleep10x.xxx)  
The Scarlet Letter (scrlt10x.xxx)  
The Time Machine-HG Wells (timem10x.xxx)  
The War of the Worlds-HGW (warw10xx.xxx)  
Zen & the Art of Internet (zen10xxx.xxx)

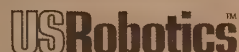
### E-texts released in 1991, in directory /etext/etext91

1990 CIA World Factbook (world12x.xxx)  
Aesop’s Fables (aesop11x.xxx)  
Alice in Wonderland (alice29x.xxx)  
Moby Dick (mobyxxxx.xxx)  
Paradise Lost (plboss11.xxx)  
Peter Pan (for US only) (peter14a.xxx)  
Roget’s Thesaurus (roget12x.xxx)  
The Book of Mormon (mormon13.xxx)  
The Federalist Papers (feder12x.xxx)  
The Hunting of the Snark (snark12x.xxx)  
The Song of Hiawatha (hisong11.xxx)  
Through the Looking Glass (lglass16.xxx)



# New Generation of American Network Solutions

**ISC Computers & Communications, Inc.**  
Network Products for Servers & Workstations



- SCO OPEN SERVER supports Netware, DOS, and Windows
- UNIX/ OPEN DESKTOP/ OPEN SERVER.
- SCO/ Interactive UNIX/ Univel
- Multiuser, multitasking, open-system. Industry standards.
- Support TCP/IP, NFS, IPX/SPX.
- Support MS-DOS Compatible applications.
- Support MultiProcessor systems (SCO MPX).



- UNIVEL SVR 4.2 P.E./ Utilities (CD-ROM) \$169/179
- UNIVEL Applications Server..... \$925
- NEW...SCO OPEN SERVER(CD-ROM) 16-user..\$1695
- SCO ODT Personal / Server..... \$939/759
- SCO TCP/IP RTS 2 user/unlimited/MPX... \$295/475/675
- Sunsoft Interactive Unix SVR3.2.4 Single/Multi..\$325/595
- Solaris 2 X86 1-2user/Workgroup Server..\$539/1398



- HP NetServer 4d/66 LM w/16Mb, 1Gb.....\$5499
- HP 9000 practical Business Workstations-Series 700
- Call for HP/CA-UNICENTER bundled promotion.
- HP LaserJet 4si MX for Multiple platforms Networks.
- HP PaintJet XL300PS RISC based Postscript.....\$3155
- HP 715/33 PA-RISC Workstation.....\$5390
- HP DesignJet 600 Plotter/DraftPro DXL/EXL.....\$call



- Call us to computerize your accounting, marketing and connect system with CA office automation products.
- Computer Associate-Accpac Plus Accounting
- Authorized Consultant and Qualified Installer avail.
- Fully client-server setup or stand alone systems.
- Thousands of vertical market add-in products.
- Supports Novell, Lantastic, OS/2, and more....



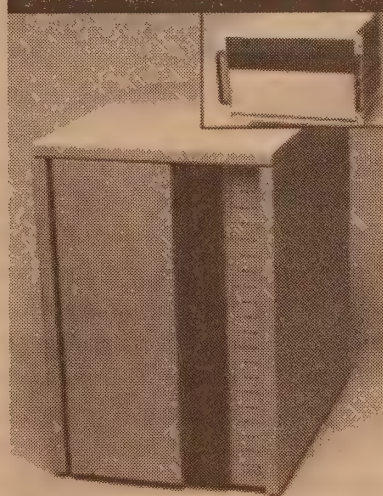
- Increase your productivity by 400%.. LOTUS NOTES
- Lotus Notes Starter Kit.....\$829
- School/Educ. Institutions please call for best ACAD version Lotus software pricing
- CC. Mail DOS/WIN.....\$199/315
- CC. Mail UNIX/O S2/MAC.....\$599/329/329
- CC. Mail Router/Remote.....\$829/189
- CC. Mail Client 10/25/100.....\$229/538/2069

## Apple Product Family



- ISC's LATEST addition to the product line...
- Powerbook 145B 4/40.....\$1259
- Mac LCIII 4/160 MB.....\$1315
- Mac Centris 650 8/230 w/Ethrn.....\$2088
- Mac Centris 650 8/230 w/CD Rom & Etrnt....\$2415
- CENTRIS 660AV & Quadra 840AV
- New Centris 660AV w/230MB 14" Ceir NI Mont.\$2088
- All Printer & other peripherals are available.

## Servers... Workstations...



## Multi-platform Services

- Free consultation Hot Line
- Best price on Networking peripherals & systems
- Network system design/training
- Modem/Phone/On-Site support
- Data/Voice/Fax Networks
- Hundreds of network applications available
- Scheduled maintenance
- Multi-platform connectivities.



- Novell Self-pace course kits for administrators/ CNE
- NetwareV3.11(10/20/50).....\$1199/1599/2419
- NetwareV3.11(100/250usr).....\$3379/6699
- NetwareV4.01(5/10/25/50).....\$845/1899/2799/3749
- NetwareV4.01(100/250).....\$5289/9399
- Multi Protocol Router (IPX,IP,AppleTalk,OSI).....\$721
- LAN Workgroup (5/20).....\$1119/2599

## Novell Update

- We are SFT III specialists, call us to set up your ZERO-downtime mission critical servers.
- Netware 4.01 is shipping now....call for upgrades.
- NetWorth hubs integrates Netware multiprotocol router.
- LAN Workgroup (10-user).....SPECIAL.....\$1590
- Netware HostPrint is available now, starting at \$495
- NFS Gateway-(5/10/50usr).....\$995/1695/3285

## Monthly Special

- Microsoft SQL database Server 10 user.....\$1999
- Runs on LAN Manager, Netware, Banyan VINES, and IBM LAN...
- BEST Windows NT VLB SYSTEM.....\$2198
- Need 32-bit applications?
- We have over 200 to choose from....
- Windows NT/upgrade.....\$328/275
- Windows NT Advance Server.....\$999/559

## High Performance Arena

### High Performance Super Systems

All systems are preloaded with one of the following OS:  
Windows NT, Lan Manager, SQL, SCO ODT and Open Server  
Solaris 2 X86 or Interactive, Novell 3.11, 4.0 and Univel  
**Call for preconfigure O.S. system pricing...**



- The Best SUN SPARC clone HWS-210
- 40MHz SPARC chip microprocessor, 64k cache, 16MB RAM
- 535 MB hard drive, 3 SBus slots, 1.44FD and GX Frame
- 20-inch color monitors.....\$7349.00
- AST Manhattan SMP Multiprocessor Server.
- Scalable, High-available, Fully Symmetrical, Raid 0, 1 & 5.
- Call us to fine out how we can integrate your workstation.

**Tech Support Hotline:**  
**(408) 227-2287**

Tel: (408) 227-2286 • Fax: (408) 227-3086  
Corporate/School PO and RFP welcome

**ISC Computers & Communications, Inc.**

23 Great Oaks Blvd.. Suite E, San Jose, CA 95119  
Free initial consultation



# Help On The Way:

## Computers Streamline Aid To The Homeless

BY JIRI  
WEISS, JR.

**B**eing homeless can be a full-time job. Some 784 agencies, both private and public, serve the Bay Area's homeless, according to the United Way's Homelessness Prevention HELPLINE, a San Francisco-based referral service. For someone facing eviction or in need of money to feed their kids, finding help can mean making a lot of phone calls, filling out forms and getting interviewed. "You're asked the same questions over and over again, in agency after agency," says Barbara Bunn McCullough, president of Paradigm Innovations Inc., who does consulting for homelessness programs throughout the Bay Area.

Case workers fill out paper forms which, if the agency they work for is lucky, eventually get entered into a database. The record keeping is so spotty and sporadic that McCullough has trouble getting the information she needs to apply for grants.

Surprisingly, nobody even knows for sure how many homeless people there are in the Bay Area. The San Francisco research organization HomeBase estimates as many as 230,000 people were homeless in the Bay Area at some time during 1990, the last year for which any figures exist.

### THE INDUSTRY PITCHES IN

Efforts on the part of the Silicon Valley community are beginning to help. Hundreds of high-tech industry employees, retired people, university students, and faculty volunteer their time to help social service organizations computerize, enabling them to respond better to the growing homelessness problem. Hardware and software vendors, including Apple, Claris and Hewlett-Packard, are also helping with donations of equipment and software.

The Alameda County Emergency Services Network (ESN), a coalition of 276 agencies, many of which deal with the homeless, has started to distribute, for a

nominal fee, a FileMaker Pro database template created by a Bay Area volunteer organization, CompuMentor. The FileMaker Pro software itself is donated by Claris. Now the member agencies will input information directly into a standard form on the computer, then mail a diskette or transmit the file by modem to ESN each week.

CompuMentor, a San Francisco organization that matches the skills of volunteers to nonprofit agencies who need computer help, has also been helping Hayward-based Eden I&R, Inc., a referral and translation service, to computerize its office databases. Even computer-phobic volunteers can use the FileMaker database to enter information about a caller while they are on the phone, says Barbara Bernstein, the agency's executive director. Someone calling Eden's Homeless Phone Line in search of permanent housing, for example, gets asked about how much rent they can pay and where they want to live, as well as questions about special needs such as handicapped access and languages other than English. The database matches the profile with similar information supplied by landlords. The system can also note if the caller is eligible for a housing voucher or other forms of assistance.

"We wouldn't be able to do what we do without CompuMentor," Bernstein says.

"I got blank stares when I first started hooking up the modem," says Saul Chaikin, a retired SRI International chemist who helped to train the Hunger & Homeless Action Coalition's staff. "Once they saw names of people they knew already online, their eyes lit up."

Some 835 professionals—programmers, consultants, engineers, teachers, accountants, and retired people—have joined CompuMentor. Volunteers train, set up modems and databases, and even program custom applications. Sometimes answering a few questions over the phone a couple of hours a week is enough. Examples of other projects:

•Wiley Simonds, senior engineer with US Sprint, spends some two hours a week helping St. Anthony's Padua Dining Room, a Menlo Park soup kitchen which serves up to 640 people daily. The Microsoft Works database he set up tracks the schedules of the dining room's 160 volunteers and churns out thank-you letters to food donors.

"In my work I don't see immediate feedback. Here I walk away and feel like I have accomplished something," Simonds says about his volunteer experience.

•At the Hunger & Homeless Action Coalition, a San Mateo agency which provides child care and designs self-help programs

for the homeless, CompuMentor volunteers helped the agency put out brochures and newsletters with PageMaker, cleaned up a Microsoft Works spreadsheet and database, and trained the staff how to go online with MicroPhone communications software.

"I got blank stares when I first started





Hardware Knowledge Group, Inc.

# \$0 DOWN 90 DAYS SAME AS CASH

ON APPROVAL OF CREDIT  
1 YEAR PARTS & LIFETIME LABOR WARRANTY!

INSTANT  
CREDIT!

All Systems Include: Mini Tower Case; 1MB RAM; IDE Controller (2HD, 2FD); AT I/O (2s, 1p, 1g) Ports; 101 Enhanced Keyboard

## 386SX-33

- 80 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card

\$679

## 386DX-40

- 64K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card

\$729

## 486DLC-33

- 128K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card

\$769

## 486SX-25

- 64K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card

\$779



## 486DX-33

- 256K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card
- 3 VESA Local Bus Slots

\$989



## 486DX-50

- 256K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card
- 3 VESA Local Bus Slots

\$1139



## 486DX2-66

- 256K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card
- 3 VESA Local Bus Slots

\$1209



## 486DX-33

VESA Local Bus

- 64K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card
- VLB SVGA Card & VLB IDE Controller
- 3 VESA Local Bus Slots

\$1059



## 486DX2-66

VESA Local Bus

- 64K Cache
- 130 MB Hard Disk
- 1.2 or 1.44 FD
- SVGA Monitor and Card
- VLB SVGA Card & VLB IDE Controller
- 3 VESA Local Bus Slots

\$1279



## PERIPHERALS AND ACCESSORIES

### MONITORS

|                                        |       |
|----------------------------------------|-------|
| 14" SVGA .38dp                         | \$210 |
| 14" SVGA .28dp                         | 245   |
| 14" SVGA .28dp NI                      | 270   |
| 15" Impression 5, 1280x1024, .28dp, NI | 395   |
| 17" Impression 7, 1280x1024, .28dp, NI | 890   |
| 14" ViewSonic 4E                       | 289   |
| 14" ViewSonic 6E, NI                   | 315   |
| 15" ViewSonic 6F5, NI                  | 530   |
| 17" ViewSonic 7, NI                    | 950   |
| 17" KFC 1713, 1280x1024, .26dp, NI     | 795   |
| 15" NEC 3FGe                           | 600   |
| 15" NEC 4FGe                           | 709   |

### HARD DRIVES

|                 |       |
|-----------------|-------|
| 80 MB IDE       | \$165 |
| 130 MB IDE      | 180   |
| 170 MB IDE      | 190   |
| 213 MB IDE      | 220   |
| 245 MB IDE      | 245   |
| 340 MB IDE      | 310   |
| 540 MB IDE/SCSI | CALL  |
| 1.2/1.7 GB      | CALL  |

### VIDEO CARDS

|                               |         |
|-------------------------------|---------|
| Trident 512K                  | \$38    |
| Trident 1MB                   | 46      |
| Spider SVGA VLB 1MB           | 102     |
| Spider Black-Widow VLB 1M/2M  | 230/320 |
| Diamond SpeedStar Pro ISA/VLB | 125     |
| Diamond Stealth ISA/VLB       | 160     |
| Orchid Fahrenheit VLB 1MB     | 165     |
| ATI Graphics Ultra Plus 2M    | 249     |
| ATI Graphics Ultra Pro 2M     | 365     |

### PRINTERS

|                        |                   |
|------------------------|-------------------|
| Brother HJ-400 Ink Jet | \$295             |
| Panasonic 1123         | 210               |
| Panasonic 2123         | 245               |
| Panasonic KX-P4410     | 645               |
| HP Laser 3P/4/4L/4M    | 859/1369/699/1899 |
| HP 500/500C/550C       | 329/409/609       |

### MISC.

|                                     |         |
|-------------------------------------|---------|
| 2400B Modem                         | \$35    |
| Fax/Modem (9600/2400) Int           | 55      |
| Fax/Modem 14,400/14,400 Int/Ext     | 165/185 |
| Summit Tape Back-Up                 |         |
| 250 MB                              | 210     |
| Colorado Tape Back-Up               |         |
| 120 MB                              | 155     |
| 250 MB                              | 205     |
| Archive Tape Back-Up 250 MB         | 165     |
| Ethernet Card 16-Bit                | 99      |
| Logitech Scanman 32 w/OCR Software  | 139/185 |
| Logitech Scanman 256 w/OCR Software | 249/299 |
| 3 Button Mouse                      | 15      |
| Logitech First Mouse/MouseMan       | 40/75   |
| 1.2/1.44 MB Floppy Drive            | 50      |
| Chicony 101 Enhanced Keyboard       | 20      |
| Sony/Panasonic CD ROM               | 230     |

### MONTHLY SPECIALS

- SOUNDBLASTER 16 ASP .....\$209
- 144/144 FAX/MODEM INT/EXT .....\$165/185

## MULTIMEDIA

### STARTER PAK

- Panasonic 522 CD-ROM
- SoundBlaster Pro Deluxe Sound Card
- Encyclopedia CD-ROM

\$330

### PERFORMANCE PAK

- Panasonic 562 CD-ROM Drive (Double Speed, 300KB/s)
- SoundBlaster 16 Sound Card
- Encyclopedia CD-ROM

\$395

### OTHERS

- SoundBlaster Pro Deluxe .....\$119
- SoundBlaster 16 .....159
- SoundBlaster 16 ASP .....205
- Toshiba 3401B SCSI CD-ROM ..399



Hardware Knowledge Group, Inc.

M-F: 10am-7pm  
Sat: 10am-7pm  
Sun: 11am-6pm

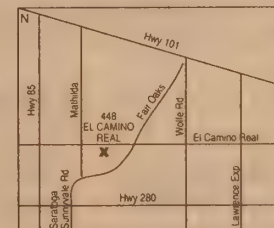
Corporate PO's Welcome

448- EAST EL CAMINO REAL  
SUNNYVALE, CA 94087

(408)-SEEK-HKG (733-5454)  
Fax: (408) 733-5456



Prices Subject To Change W/O Notice





hooking up the modem," says Saul Chaikin, a retired SRI International chemist who helped to train the coalition's staff. "Once I took them through all the steps to get online and they saw names of people they knew already online, their eyes lit up."

•Another CompuMentor volunteer, Phil Grenfell, spent more than a hundred hours programming in C to create a text database he calls Community Information Finder. Two Bay Area and two Canadian social service agencies are using the program to keep contact information and answers to frequently asked questions at computer operators' fingertips. An agency extracts information it normally keeps in a database such as dBASE into a text file, and the software creates an index for instantaneous retrieval. The Community Information Finder is available free of charge.

"I got into this because I've worked for mining and paper companies which destroy the environment, and had a feeling I've done nothing to make the world better," says Grenfell, a LAN specialist at McClellan Air Force Base, "I wanted to show that computers can do something for people, rather than making money for large corporations." Rewards for donating time at a nonprofit with CompuMentor can go beyond warm-fuzzy feelings. Eric Bickford,

Wiley Simonds, senior engineer with US Sprint, spends some two hours a week helping St. Anthony's Padua Dining Room, a Menlo Park soup kitchen which serves up to 640 people daily. The Microsoft Works database he set up tracks the schedules of the dining room's 160 volunteers and churns out thank-you letters to food donors.

a computer specialist who worked on the Eden I&R database, says he's expanding his professional horizons. "It gave me good experience working with other organizations, something I will be able to use when I start my own business."

# Volunteer Opportunities

If you are interested in getting involved in bringing the benefits of computer technology to nonprofit organizations, CompuMentor is currently looking for volunteers with the following skills: Mac and DOS basics (including system management, troubleshooting, and utilities); needs assessment; selecting, analyzing, programming and debugging databases including FileMaker/Pro, Paradox, dBASE, FoxBase/Pro and 4th Dimension; installation and troubleshooting for LANS; and selection, installation, and support of accounting packages.

CompuMentor is located at 89 Stillman Street, San Francisco, CA 94107; (415)512-7784; fax (415)512-9629. For other volunteer opportunities you can also contact the Volunteer Centers of the Bay Area, which refer some twenty-five thousand volunteers each year to three thousand nonprofit agencies. Call 1-800-CARE-123.

CompuMentor is not the only volunteer agency helping nonprofits computerize. The university community has responded as well. San Jose State University Business School worked on a plan for a homeless shelter reservation system for Santa Clara County. The Santa Clara Valley MultiService Center plans to unveil the first phase this September: voice mail for the homeless and a shelter availability hotline which will use an 800 number and touch-tone menus to automatically tell homeless people where there is a bed available for the night. By the end of the year there should be a reservation system for shelters and information databases online as well.

The San Francisco State University computer science department has set aside computer time to run an online bulletin board for homeless-service providers called SFSUnet. It's a free dialup for anyone within

the local telephone service of one of the state's nineteen state university campuses, says Pat Bourne, SFSUnet director. That's a godsend for agencies that have had to pay \$12 or more per hour with commercial services.

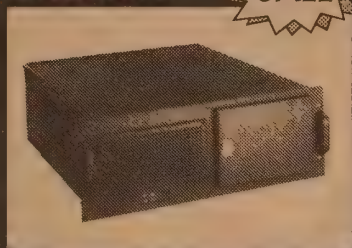
Up to twenty students get credit for training nonprofits how to set up communications software and use the bulletin board system. Together with CompuMentor, the university's faculty and students have trained some 150 Bay Area agencies to get connected.

The agencies use SFSUnet to post available jobs for the homeless, participate in conferences, and exchange mail. A legislative committee posts information on upcoming hearings and bills so that member agencies can respond, Bourne says. "At a time when there is such intense pressure on essential human services, that is sorely needed." ■



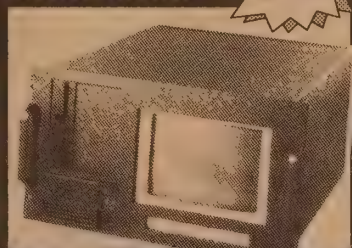
### 19" RACKMOUNT ENCLOSURE

**CALL**



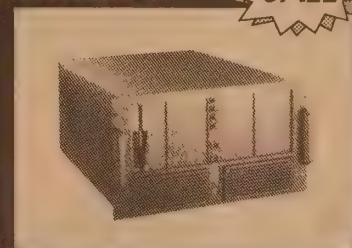
### 19" RACKMOUNT W/MONITOR

**CALL**



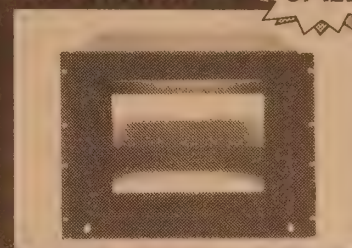
### 19" RACKMOUNT ENCLOSURE

**CALL**

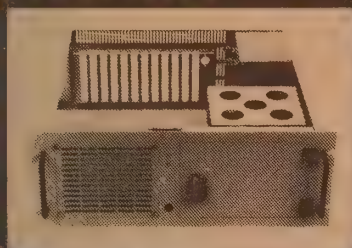


### 19" RACKMOUNT MONITOR KIT

**CALL**



**MADE IN U.S.A.**

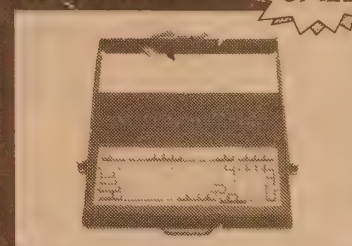


- 19" Rackmounting
- Integral Monitor
- 10" .28 dot pitch SVGA Color
- 9" Mono-TTL or VGA
- 8 or 14 Slot Passive Backplane
- 8 Slot Motherboard Mounting

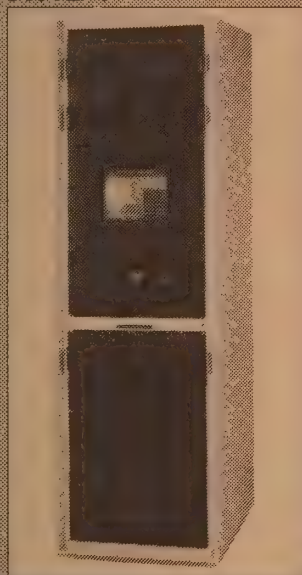
- 8, 14 & 20 Slot Options
- Dual Power Supplies
- Power Supply Redundancy Option
- 8 Drive Bays
- 8 Fans
- Motherboard or Passive Backplane
- 200-1000 Watt Power Supply
- USA Manufactured

### 19" RACKMOUNT KEYBOARD

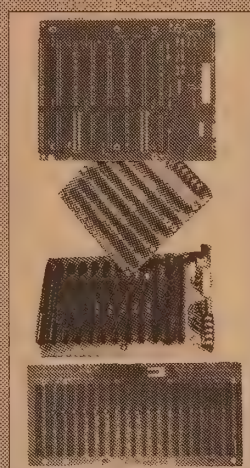
**CALL**



### CENTRALIZED LAN SYSTEM



### PASSIVE BACKPLANE BOARD

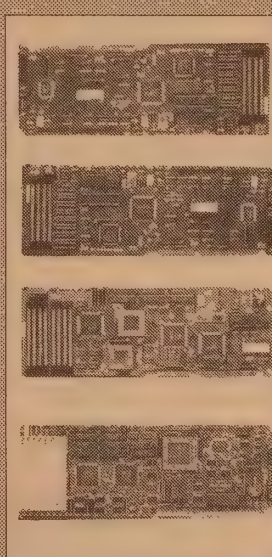


- 6 SLOT .....\$53
- 8 SLOT .....\$35
- 12 SLOT .....\$90
- 14 SLOT .....\$94
- 18 SLOT ...\$180
- 20 SLOT ...\$194

#### SPECIAL OPTION

- 14 SLOT SEGMENTED 6,4,4
- 18 SLOT SEGMENTED 5,4,4,5
- 20 SLOT SEGMENTED 5,5,5,5

### SINGLE CPU BOARD



Guaranteed high reliability.  
100% SMD board.

286C-12 w/CPU .....\$125  
(w/8 Slots)

386SXC-16 w/CPU .....\$220  
386SXC-20 w/CPU .....\$280  
(w/8 Slots)

386DXC-33 w/CPU ...\$380

486DXC-33 w/oCPU ..\$550  
Upgradable To DX-50, DX2-50/66

Available with AMI & Phoenix BIOS

### SYSTEMS FOR SALE

- 286C-12 CPU Card System .....\$248
- 386SX-16 CPU Card System .....\$430
- 386SX-20 CPU Card System .....\$440
- 386DX-33 CPU Card System .....\$515

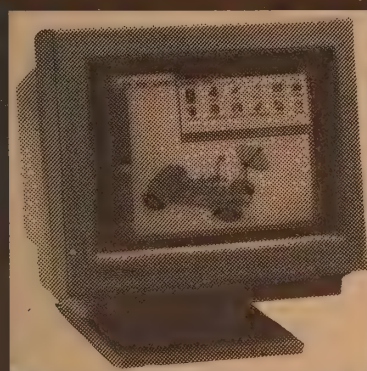
#### \*Basic System Configuration

- Mini Tower Case w/200W PS
- 1 MB RAM - 1 FDD
- 512K VGA
- 14" Mono VGA Flat Screen Hyundai Monitor
- 101 Keyboard

**SPECIAL**

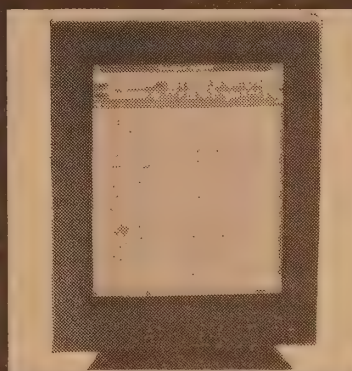
**ACT!® CALL**

BEST SELLING CONTACT MANAGER  
SOFTWARE FOR 5 STATION NETWORKS



### 14" SVGA COLOR MONITOR

- CRT 14" DIAGONAL NON-GLARE FLAT
- DOT: .28mm
- RES: 1024 X 768 NON-INTERLACE
- 800 X 600, 720 X 400, 640 X 480, 640 X 350
- POWER SUPPLY: 120-240V
- AUTO SELECTION



### 15" PAPER WHITE VGA MONITOR

- CRT 15" DIAGONAL, NON-GLARE FLAT PAPER WHITE
- RES: 640 X 600, 640 X 550, 640 X 350, 720 X 400, 640 X 480
- POWER SUPPLY: 120V



### 15" MACINTOSH FULL PAGE MONITOR

- CRT 15" DIAGONAL, NON-GLARE FLAT PAPER WHITE
- MACINTOSH II, SE, SE/30 COMPATIBLE
- RES: 640x872 FULL PAGE
- POWER SUPPLY: 96 to 250V

### 15" MULTISCAN VGA COLOR MONITOR

- CRT 15" DIAGONAL, NON-GLARE FLAT
- DOT: .28mm PERFECT FLICKER FREE
- RES: MULTISCAN NON-INTERLACE
- 640 X 480, 800 X 600, 1024 X 768
- POWER SUPPLY: 90-260v

## HYUNDAI

### 1. COLOR MONITORS

| Model     | DESCRIPTION                                                               | PRICE |
|-----------|---------------------------------------------------------------------------|-------|
| HMC-123B  | 14" SUPER VGA<br>39 Dot Pitch                                             | \$248 |
| HCM-423E  | 14" SUPER VGA<br>28 Dot Pitch                                             | \$300 |
| HCM-433E  | 14" SUPER VGA<br>28 Dot Pitch Non-Int                                     | \$350 |
| HCM-540EV | 15" SUPER VGA<br>28 Dot Pitch Non-Int<br>MPR II Flat Screen,<br>Multiscan | \$468 |

### 2. MONOCHROME MONITORS

| Model                 | DESCRIPTION                            | PRICE  |
|-----------------------|----------------------------------------|--------|
| HMM-413               | 14" Paper White<br>Flat Screen VGA     | \$119  |
| HMM-551               | 15" Portrait Paper<br>White VGA        | \$254  |
| HMM-550               | 15" Portrait Paper<br>White VGA (IMAC) | \$260  |
| Adapter For Apple Mac |                                        | \$7.00 |

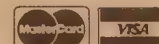
**\*WE WELCOME RESELLERS  
\*FOR MORE INFORMATION PLEASE  
CONTACT MULTI-MICRO SYSTEMS**

**Multi-Micro  
systems**

TEL: (408) 456-0333  
(800)-875-0333  
FAX: (408) 456-0366

62 Bonaventura Drive • San Jose, CA 95134 • Mon-Fri: 9am-6pm

Terms & Conditions  
Prices subject to change without notice. Not responsible for typos or errors. Prices based on cash. Please ask about products not listed in this advertisement. 1 year warranty on parts.





# Claris At Work, Again

## ClarisWorks 2.0 For The Macintosh Adds New Strength To The Field Of Integrated Software

**BY MIKE  
MARKOWITZ**

### RESOURCES:

**ClarisWorks 2.0,**  
**\$299; \$99 upgrade for**  
**registered owners of**  
**ClarisWorks 1.0**  
Claris Corp.  
5201 Patrick Henry Dr.  
Santa Clara, CA  
95052-8168  
General information:  
(408)727-8227  
Upgrade information:  
1-800-544-8554

**I**ntegrated software packages are usually not taken seriously by users who depend on a computer to make a living. The perception is that these programs combine a feeble word processor, an anemic spreadsheet, and a pathetic database into a low-cost substitute for real software; a package aimed at casual users, budget-starved schools, and hardware vendors who need to bundle something with a computer to sell it.

The first really successful integrated software package was AppleWorks, a brilliant feat of programming that helped to extend the useful life of the Apple II computer for many years. In the MS-DOS environment, Microsoft Works has been the dominant integrated software package. The Macintosh version of MS Works has been losing market share steadily to ClarisWorks, which claims about 60% of the market.

With v2.0 of ClarisWorks this lead is likely to grow.

A successful integrated software package must deliver acceptable performance on even the most minimally configured hardware, and it must provide most of the

functionality that users have come to expect from full-featured software tools. In plain-vanilla word processing, spell checking was once a luxury, but now users expect a Thesaurus as well as a dictionary, and next year they will want a grammar checker as well.

The problem with escalating "feature wars" between competing programs is that it leads to the creation of bloated memory hogs that run like something trapped in a tar pit. The Claris design team managed to avoid this trap. Despite the addition of a Paint module, an outliner, a Presentation engine, and many other new features, the application size is only 600K and a complete installation takes up 2.5MB of hard disk space.

ClarisWorks 1.0 redefined the meaning of software in integration. In most packages, "integration" makes it easy to switch between modules, and to move data from one module to another. But ClarisWorks, adds a "frame-based" level of integration. For example, the graphics and spreadsheet tools are available when you are in the middle of a word processor document. You

can open a spreadsheet frame by simply selecting the appropriate tool and dragging a rectangle anywhere on your page. You can enter data into the spreadsheet frame and use it to generate a chart that appears inside a graphic frame. All the while you haven't left your word processor document.

For many users, Mail Merge is the classic integrated function—you build your mailing list in the database module, write your form letter in the word processor, and then cross your fingers, grit your teeth, and invoke the Mail Merge demon to generate a stream of personalized printouts. Printing mailing labels has always been a high-stress project, but the ClarisWorks database now offers fifty different predefined mailing label formats, for various sizes of Avery labels.

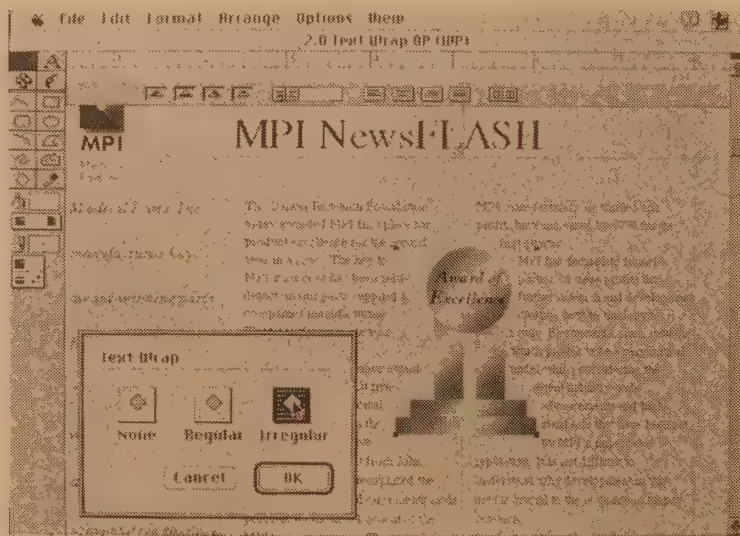
Page layout features have been greatly improved. You can have multi-column layouts with unequal column widths, and you can wrap text around irregularly shaped graphic objects (very cool).

A feature I really miss in ClarisWorks 2.0 is the ability to get a fast word count without going through a full spell check. Writers must often work to a prescribed word count, and I need something like the "document statistics" menu item in WordPerfect for Macintosh, which gives you an instant total of characters, words, lines, and paragraphs.

Users with large screens will enjoy Shortcuts—floating palettes of icon buttons that execute frequently used commands. You can create your own sequence of commands, assign it to an icon button, and add it to a Shortcut palette.

One of the best things about ClarisWorks 2.0 is that its look and feel are so familiar if you have used other Claris applications in the MacWrite, MacDraw, MacPaint, FileMaker, ClarisCAD, or Resolve series.

The more you use ClarisWorks, the more you'll like it. ■



**ClarisWorks 2.0's new word processing capabilities, such as automatic text wrap around graphics and enhanced column control enable users to create more professional-looking brochures and flyers.**



File

## Monitor & Terminal Repair Specialist

• IBM • Macs • SVGA • VGA • CGA • EGA • Monochromes • Multi-Syncs

# advantiX inc

REDWOOD CITY 1757 East Bayshore Rd. Suite 22

Factory Authorized Repair Center

**Samsung • Zenith • Radius**

• FREE TUBE REJUVENATION

• FREE ESTIMATE • FREE DEGAUSSING

• VOLUME DISCOUNT AVAILABLE • LOANERS AVAILABLE

One Year Warranty On Any Repaired Unit(s)

Tel 415 • 363 • 1225 Fax 415 • 363 • 0685

**1 800 • 553 • 5703**

Edit

## Printers, Desktops, Laptops & PC's Repair Specialist

We Deliver And Install

One Year Warranty On Any Repaired Unit(s)

# ComputerCare

MOUNTAIN VIEW 2455 Old Middlefield Way, Suite M

Authorized Repair Center **OKIDATA EPSON**



HEWLETT  
PACKARD

**COMPAQ TOSHIBA**



• Tel 415/967-8186 • Fax 415/967-6945

**• 1 800 67/CARE/4**  
2 2 7 3

### Computer Rescue

Staffed with highly skilled, qualified technicians, ComputerCare will diagnose and treat your machine's problem accurately and promptly.

### Warranty Service

ComputerCare provides warranty and post warranty service.

### Service Contracts

We loan you equipment while we repair yours. Please call us for a plan customized to best suit the needs of your company

### Other Services Available

- In Shop Service
- On Site Service
- Overnight service



# OS/2:

## Point & Click, Drag & Drop *Organizing Your OS/2 Desktop*

BY FABIAN  
PASCAL

Last month I mentioned the "unstructured" (to the user) nature of event-driven, GUI-based software. While this is, on the one hand, supposed to give users personal freedom in how they use the software, it makes explaining, or teaching, such software to a general audience a nontrivial task. Having installed OS/2, you're immediately confronted with the question of where to begin.

If you booted OS/2, you're probably not very impressed with the default Desktop, which I showed in the last article. So let's improve it a bit and, in the process, learn how to work with OS/2's WPS objects. (Desktop organization is primarily a matter of subjective preference. Do not feel obligated to accept mine.) But first let's make sure your video setup takes maximum advantage possible of the WPS.

### MAXIMIZE VIDEO RESOLUTION

Figure 1A shows some folders and windowed sessions open on the desktop at a resolution of 1024 x 768. Even though this is two notches up from standard VGA (640 x 480), it is obvious that the screen real estate is too limited to permit reasonable exploitation of OS/2's multitasking. Indeed, when a windowed session is maximized (Figure 2A), it makes all other desktop tasks invisible, and thus also makes multitasking cumbersome.

Fig. 1A

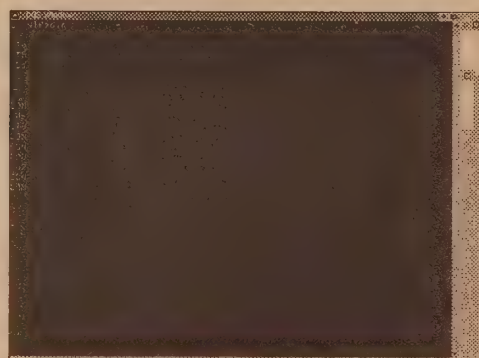
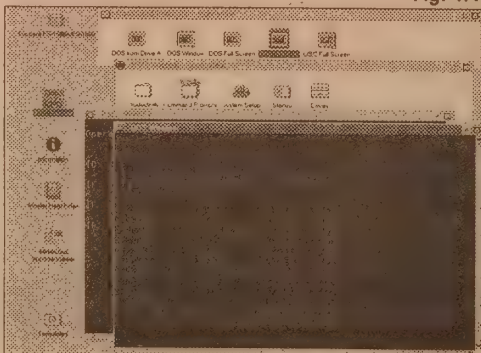


Fig. 2A

For non-MCA systems, the maximum resolution currently built into OS/2 is 1024 x 768 in the 8514/A mode. If your eyesight is not good enough for higher resolutions you must, alas, stick with this. Otherwise, with a monitor of at least 16" and a video adapter with a proper OS/2 driver, the resolution can be upped to 1280 x 1024. In my case, there is a 16-bit beta driver for the ATI Graphics Ultra Pro card available. Figures 1B and 2B are the 1280 x 1024 equivalents of figures 1A and 2A. The improvement is obvious.

Fig. 1B

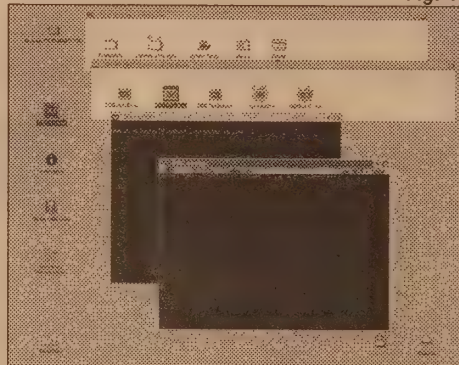
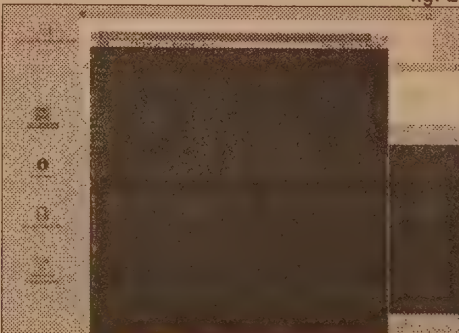


fig. 2B



(Note: The installation procedures for high resolution drivers—if available—vary by adapter/manufacture. ATI's driver comes with an OS/2 installation program.)

### OPENING AND CLOSING OBJECTS

Objects are opened by double-clicking the left mouse button (LMB) on their icons. Unless they are set to close automatically when you exit them, you close them by LMB-clicking on the small icon at the upper left corner of the object's title bar, which pops a menu. With most objects the menu has a Close option. With others (e.g. folders) there is a Window option, which has Close as a suboption.

### OBJECT INSTANCES AND SHADOWS

It is possible to make multiple copies of an object, but they behave independently, which can cause redundancy problems. However, you can avoid this by creating shadows. A shadow is an iconic representation that points to the underlying object: any change to either the object or its shadow is automatically reflected in both. For this reason, it is a good idea to keep objects: in folders, and bring to the desktop shadows of only those objects that you want handy.

Shadows are visually distinguishable by a lighter object name. Of the desktop objects installed by OS/2 only one, Drive A, is a shadow of that drive object in the Drives folder; the rest are "actual" objects. So you need to move the objects into folders first, then decide which to shadow on the desktop.

There are usually two ways to manipulate objects, drag-and-drop and menu driven. I always prefer the former, where available.

Copyright © 1993 by Fabian Pascal. All rights reserved. Fabian Pascal is a Palo Alto independent consultant, teacher, and writer specializing in relational database management, OS/2, and office and portable computing. An industry analyst, he teaches seminars, consults, and has published extensively. His second book, *Understanding Relational Databases*, is forthcoming from John Wiley. He can be reached on MCI Mail (FPascal), CompuServe (73677,3306), and at (415)325-0646 (fax/voice).



# TRIAD COMPUTER

## ISA 386DX-40

- \* 40 MHz 386 DX Processor
  - \* 4MB Ram w/128K Cache
  - \* 170MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mini-Tower Case w/230Watts
- \$ 894**

## ISA 486SX-25

- \* 25MHz 486SX Intel Processor
  - \* 4MB Ram
  - \* 170MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mini-Tower Case w/230Watts
- \$ 934**

## ISA 486DLC-33

- \* 33MHz 486 Cyrix Processor
  - \* 4MB Ram W/128K Cache
  - \* 170MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mini-Tower Case w/230Watts
- \$ 964**

## ISA 486DX-33

- \* 33MHz 486DX Intel Processor
  - \* 4MB Ram w/256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1198**

## ISA 486DX-50

- \* 50MHz 486DX Intel Processor
  - \* 4MB Ram w/256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1344**

## ISA 486DX2-66

- \* 66MHz 486DX2 Intel Processor
  - \* 4MB Ram w/256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* IDE Controller w/IO
  - \* 14" Color SVGA Monitor
  - \* SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1398**

## VESA LOCAL BUS SYSTEMS

### 486DX-33

- \* 33MHz 486DX Intel Processor
  - \* Zif Socket-Pentium Ready
  - \* 4MB Ram w/256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* VLB 32Bit IDE Controller w/IO
  - \* 14" NI .28 SVGA Monitor
  - \* Spider Windows Accelerator
  - \* VLB SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1338**

### 486DX-50

- \* 50MHz 486DX Intel Processor
  - \* Zif Socket-Pentium Ready
  - \* 4MB Ram w/256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* VLB 32Bit IDE Controller w/IO
  - \* 14" NI .28 SVGA Monitor
  - \* Spider Windows Accelerator
  - \* VLB SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1464**

### 486DX2-66

- \* 66MHz 486DX2 Intel Processor
  - \* Zif Socket-Pentium Ready
  - \* 4MB Ram /256K Cache
  - \* 250MB IDE Hard Drive
  - \* 1.2 & 1.44MB Floppy Drive
  - \* VLB 32Bit IDE Controller w/IO
  - \* 14" NI .28 SVGA Monitor
  - \* Spider Windows Accelerator
  - \* VLB SVGA Card w/1MB
  - \* 101-Enhanced Keyboard
  - \* Mid-Tower Case w/230Watts
- \$ 1544**

### SVGA Monitors

|                        |       |
|------------------------|-------|
| 14" Addonics .39       | \$205 |
| 14" Addonics .28       | \$235 |
| 14" Addonics .28NI     | \$265 |
| 15" Addonics .28NI L.R | \$425 |
| 17" Addonics .28NI L.R | \$795 |
| 15" KFC .28NI          | \$445 |
| 17" KFC .26NI          | \$765 |
| 14" ViewSonic 6e .28NI | \$285 |
| 15" ViewSonic 15 .28NI | \$495 |

### Video Card

|                             |       |
|-----------------------------|-------|
| Trident w/1MB               | \$55  |
| Cirrus Logic w/1MB          | \$65  |
| Spider VLB w/1MB            | \$89  |
| Genoa VLB w/1MB             | \$95  |
| Orchid Fahrenheit VLB w/1MB | \$140 |
| Diamond Stealth 24VLB w/1MB | \$140 |
| Spider Black Widow w/1MB    | \$195 |

### Hard Drives

|                         |       |
|-------------------------|-------|
| Conner 170 IDE          | \$170 |
| Western Digital 210 IDE | \$210 |
| Conner 250 IDE          | \$225 |
| Western Digital 340 IDE | \$280 |
| SCSI H/D                | Call  |

### Misc & Accessories

|                                  |       |
|----------------------------------|-------|
| IDE w/IO Controller              | \$14  |
| IDE w/IO VLB Controller          | \$33  |
| IDE Cache Controller             | \$95  |
| IDE Cache VLB Controller         | \$135 |
| 2400 Modem                       | \$27  |
| 96/40 Fax Modem                  | \$42  |
| Zoltrix 14.4/14.4 Fax Modem      | \$135 |
| U.S Robotics 14.4/14.4 Fax Modem | \$165 |
| Mitsumi CD-Rom w/Controller      | \$160 |
| Colorado 250MB Tape Back-up      | \$165 |
| CPU & Memory                     | Call  |

## TRIAD COMPUTER

1176 Aster Ave. Suite B  
 Tel. (408) 247-7356  
 Fax. (408) 247-5976  
 Tech.(408)247-8721  
 HRS: Mon - Fri  
 9:00AM - 5:00PM

Hwy 101  
 Evelyn Aster Ave.  
 Reed Monroe  
 El Camino Real  
 Hwy 280  
 Lawrence Exp.

Not Responsible for typo-errors  
 Prices subject to change w/o notice  
 All systems w/two years labor & one year part.



# You

## can create shadows for only those objects you want on the Desktop—determined by your personal tradeoffs between convenience and clutter.

### MOVING OBJECTS

To move an object to a folder, select it by RMB-clicking on its icon and, without releasing the button, “drag” it to the desired folder and “drop” it on the folder’s icon by releasing the mouse button (the folder does not have to be open, but if it is, just drop the object anywhere within the folder).

I used this method to move, first, the Shredder, Templates, Minimized Window Viewer, and printer object from the desktop to the OS/2 System folder. As we saw last month, the installation program creates a folder called Productivity for whatever built-in applications you opt to install. I installed only the OS/2 System Editor, Icon Editor, and Clipboard Viewer. I simplified matters by moving them to the OS/2 System folder and deleting the empty Productivity folder.

### DELETING OBJECTS

To delete an object, you RMB-click on it to invoke its pop-up menu. One menu option is usually Delete. LMB-click on it, and a dialog window pops up, prompting you to validate your decision. LMB-click on the Delete button, and the object gets deleted.

I used this method to delete the Productivity folder. Once finished with the Start Here object, you can delete it too. Remember, however, that this only deletes the desktop representation, not the actual object—the program file—which is stored in the OS/2 directory. You can, alternatively, move the Start Here icon (for future reference), together with the Master Help Index, to the Information folder, which also contains the Glossary and Command Reference objects. I moved the Information folder itself to the OS/2 System folder.

### CHANGING OBJECT NAMES

You will notice that some of the preinstalled objects have long names, which are too wide relative to their icons—for example Minimized Window Viewer or, in my case, the printer. You can, if you like, change object names. There is a more direct way to do it, but I prefer to use the settings book.

Each object has one which, when open, looks like a spiral notebook with tabbed pages. Each page provides access to certain settings pertinent to the object of that type, which you can customize.

Invoke an object’s pop-up menu, RMB-select the Open option, then the Settings suboption. This opens the Book (Figure 3A), and you can tab through its pages to find the one with the name, which is usually General (Figure 3B). You then simply edit the name, and close the book. I made the following changes:

Command Prompts >> Cmd Prompts  
OS/2 System Editor >> System Editor  
Minimized Window Viewer >>  
MinWinView  
Kyocera FS-1500A/FS-1500 >> Kyocera

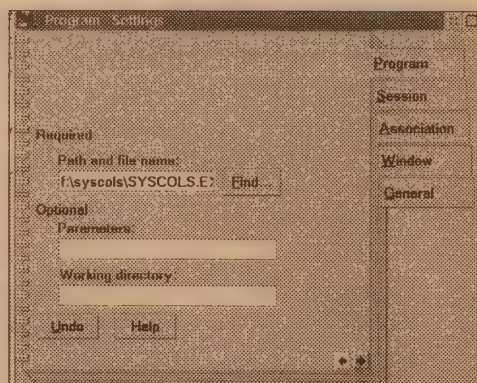


Fig. 3A

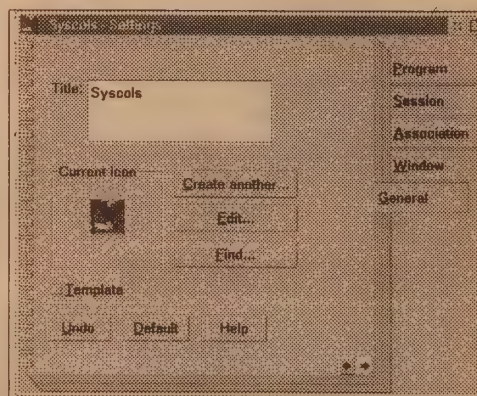


fig. 3B

### CREATING SHADOWS

With the preinstalled objects organized to your preference, you can now create shadows for only those objects you want on the desktop—determined by your personal

tradeoffs between convenience and clutter. Objects that you use frequently should be represented on the desktop.

To create a shadow, invoke the object’s pop-up menu and LMB-select the Create Shadow option. You will get a dialog box which lists the open folders, one of which is, of course, the Desktop. LMB-select it, then RMB-click on the Create button, and you will see the object’s icon popping as a shadow on the desktop.

The shadows I chose to put on the desktop are Drives (it includes Drive A, which I deleted), Templates, the printer, and three character-based sessions from the Cmd Prompts folder: OS/2 Window, DOS Window, and DOS Full Screen (whose name I abbreviated to DOS).

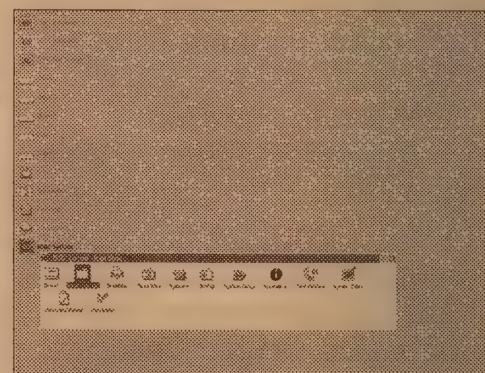


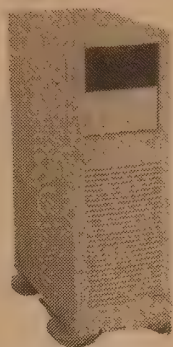
Fig. 4

Finally, I prefer my icons organized vertically on the left-hand side of the screen. To this end I invoked the desktop’s pop-up menu (by RMB-clicking anywhere on it), and on the first page of the settings Book View, I set the Icon View to Flowed. Figure 4 shows the final Desktop with the OS/2 System folder open (it has shadows of individual drives, rather than one for the Drives object).

Note: OS/2 installation is not very neat, and may create folders (and thus directories) that you do not need. In my case, for example, it created directories for WINOS2, the Tutorial, and Network even though I did not install them. You may delete them. ■



**SPECIAL**



Dual cooling fans, Easy Access swing open side doors, Slide 'n Snap drive rails, 4 exposed and 3 hidden drive bays, 230W UL power supply.

**\$149**

upgrade to 250W UL PS ..... ADD \$11  
upgrade to 300W UL PS ..... ADD \$25  
Medium Size w/230W UL ..... \$120

**EVERYDAY LOW PRICES**

**CASES & POWER SUPPLIES**

DELUXE Full-208GT (2 FANS, Easy Access Side Doors, 4 Exp'd, 3 hid'n, 230W UL) ..... \$149  
Mini-104T (4 exp'd, 1 hidden, 200W PS) ..... 49  
Med-106T (5 exp'd, 3 hid'n, 200W UL PS) ..... 75  
Full-108T (4 exp'd, 7 hid'n, 230W UL PS) ..... 99  
Full-42T (4 exp'd, 5 hidden, 220W UL PS) ..... 80  
Full-51T (7 exp'd, 1 hidden, 220W UL PS) ..... 95  
Mini-V103T (4 Exp'd, 5 Hidden, 220W PS) ..... 70  
Desktop-S203D (4Exp'd, 2 Hidden, 200W PS) ..... 75  
Desktop-K101D (1Exp'd, 2 Hidden, 100W PS) ..... 80  
Desktop-K101D (1Exp'd, 1 Hidden, 60W PS) ..... 80

**POWER SUPPLIES**

Full PS 230W UL/250W UL/300W UL ..... \$49/59/77  
Baby PS 200W /200W UL/230W UL ..... 37/41/45

**FLOPPY, HARD, TAPE, & CD-ROM DRIVES**

TEAC 1.2MB/1.44MB FDD ..... \$46/39  
All Hard Drives ..... CALL  
Colorado 120/250MB Tape Drive ..... 139/179  
Sony CD-ROM (31A) w/Controller ..... 189  
Toshiba 3401B/3401E CD-RIN (Int/Ext) ..... 415/535  
w/Controller ..... ADD 70  
NEC CDR 74/84-1 CD-ROM (Ext/Int) ..... 580/439  
Media VisionFusion CD-16 upgrade kit ..... CALL  
NEC Multimedia Upgrade Kit (Int/Ext) ..... 895/995  
Sound Blaster Pro Multimedia Kit  
w/6 CD Titles (Int/Ext) ..... 510/520

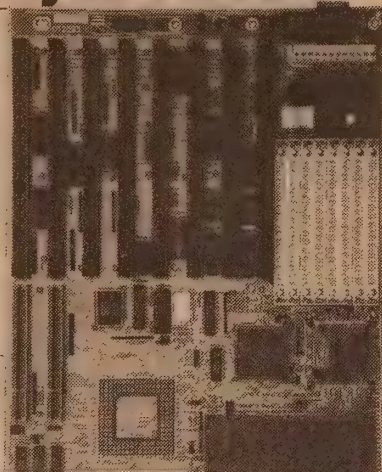
**VGA CARDS**

MGP/MCGP Card ..... \$13/19  
ACUMOS SVGA Card 256/512K ..... 31/41  
TRIDENT SVGA Card 1MB ..... 54  
Diamond SpeedStar 24X 1MB 16 Mil Colors ..... 145  
Diamond Stealth VRAM 1MB Hi-Color ..... 199  
Diamond Stealth-24 DRAM  
1MB ISA/VLB ..... 157/175  
Diamond Stealth Pro  
VRAM 1MB/2MB VLB ..... 255/355  
Diamond Viper (P9000, 2MB VRAM) ..... 385  
ATI Graphic Ultra Plus2 VRAM/w mouse ..... 277/307  
ATI Graphic Ultra Pro VRAM  
2MB ISA/VLB/EISA ..... 330/345/399  
Genoa 7900 1MB 16 Mil Colors 24 Bit ..... 109  
ORCHID Pro-Designer II's 1MB Hi-Color ..... 129  
ORCHID Fahrenheit 1MB 24-Bit VLB/VA ..... 159/189  
Spider/Black Widow VLB 1MB ..... 95/209  
AMI Fast View EISA VGA Graphics 1MB ..... 269  
AMI Fast View P9000 VLB 2MB ..... 395

# BIG SALE

★ **GREEN PC COMING SOON!** ★

**Lynx's Users: IBM, Intel, NASA, AT&T**



**PRESENTING  
LYNX GALAXY  
486VL BUS**

MADE IN THE USA  
FCC CLASS B  
ONE BOARD FITS ALL  
(Dealers Welcome)



CONTAQ chipset and AMI BIOS  
Norton SI: 75.70 @ 33MHz, 107.20 @ 50MHz  
Landmark: 160.2 @ 33MHz, over 200 @ 50MHz  
100% Compatible w/ DOS, OS/2, XENIX,  
UNIX, NOVELL NETWARE, Win. NT  
**OK/128K/256K ..... \$99/119/145**

| LYNX VLB       | Board & CPU | Basic System | LYNX          | Board & CPU | Basic System |
|----------------|-------------|--------------|---------------|-------------|--------------|
| 486DX2-66/128K | \$599       | \$759        | 386DX-40/64K  | \$125       | \$285        |
| 486DX-50/128K  | 539         | 699          | 386DX-33/64K  | 122         | 283          |
| 486DX2-50/128K | 459         | 619          | 386SX-33/64K  | 89          | 249          |
| 486DX-33/128K  | 409         | 569          | 386SX-25/64K  | 86          | 246          |
| 486SX-25/128K  | 219         | 379          | 486 EISA/VESA | CALL        | CALL         |

Basic system includes: Board & CPU, 1MB RAM, One Teac Floppy, IDE Controller, 101 Enhanced Keyboard, Mini Case w/200W PS.

**PC Editor's  
Choice**



Sept. 1992  
Volume 1 Number 6 (U.K.)



**Caching + Mirroring  
EISA Fast SCSI  
(DC-820)**

- Adaptec 1540/1542 compatible
- Hardware Disk Mirroring Support
- Cache expandable to 16MB
- High Speed 32 Bit bus master, burst data transfer up to 33MB/sec
- Fully support SCSI-I & SCSI-II protocols
- Coexists with other SCSI, ESDI or IDE card
- Support up to 8 drives for DOS 5.0
- Support Max. DOS disk capacity of 4.5 GB

**\$399**



**VESA Bus IDE CACHE  
CONTROLLER  
(DC-680)**

- < 0.3 msec Disk Average Seek Time
- Max Data Transfer Rate (VESA BUS to cache) : 20 MB/sec
- Max Data Transfer Rate (Disk to cache) : 5 MB/sec
- Supports up to 4 IDE drives & 2 Floppy drives
- WD 1003 Emulation Mode Support
- >528MB Drive support for DOS & Windows
- Cache expandable to 16MB

**\$159 (Local Bus)**

**YOUR NETWORK  
SOLUTION  
Networking Specialists**

LTI provides the most reliable Novell Network Design, Cabling, and Installation, Hardware Configuration and System Integration, Back-up Service & Data Recovery PC & Network. When you come to LTI you've made the right choice!

**1 YEAR PARTS /3 YEARS LABOR/LIFETIME TECH SUPPORT  
LIMITED WARRANTY**

**MONTHLY SPECIALS**

- TEAC 1.2MB/1.44MB FDD ..... \$46/39
- HARD DRIVES/CD-ROM ..... \$CALL
- Removable IDE HDD Kit ..... \$36
- TOUCH/Arche/MRI 14" SVGA .28 Monitor Int/Ext ..... \$239/269
- ADI MicroScan 3E/3E+/3G/4G (15")/15A (17") NI Monitor ..... \$320/345/350/455/855
- NE-2000 Ethernet Card Coax/Twist-Pair ..... \$65/69
- Full Tower Case w/220W PS (42T) ..... \$80
- Mini/Med Tower w/200W PS (104T/106T) ..... \$49/75
- MGC 15" NI SVGA Monitor (1280x1024) ..... \$399
- WC101 Click KB ..... \$15
- Spider/Black Widow VLB 1MB ..... \$95/209

**EVERYDAY LOW PRICES**

**VIDEO DISPLAY  
MONITORS**

|                                               |         |
|-----------------------------------------------|---------|
| Mono 12"/14"                                  | \$75/94 |
| ADI MICROSCAN 3E (1024X768 .28 NI)            | 325     |
| ADI 3E+/Low Rad                               | 345/250 |
| ADI 4G 15" 1280 SVGA                          | 445     |
| TOUCH 14" SVGA .28 Monitor Int/NI             | 239/269 |
| NANAO 9070U/9080i (16" 1024X768 .28)          | 955     |
| NANAO F550i (17" 1280X1024 .28)               | 1075    |
| NANAO F560i (17" 1280X1024 .25)               | 1690    |
| NANAO T660i (20" 1280x1024 .31 NI, Trinitron) | 2585    |
| NEC 3FG/4FGE (15" 1024X768 .28)               | 599     |
| NEC 5FG (17" 1280x1024 135MHz)                | 1355    |
| NEC 6FG (DEM) (21" 1280x1024 135MHz)          | 2385    |
| SEIKO CMI 2070 (1280x1024) .25                | 1999    |
| SEIKO CMI 2050 (1024x768 .31 NI)              | 1495    |
| SONY 1304S (14" 1024X768 .25 NI)              | 595     |
| SONY 1604S (OEM) (17" 1024X768 .25)           | 965     |
| SONY GDM 2038 (20" 1280x1024 .30)             | 2295    |
| VIEWSONIC V15                                 | 545     |
| VIEWSONIC V6E (14" 1024X768 .28)              | 315     |
| VIEWSONIC V6FS (15" 1024X768 .28)             | 575     |
| VIEWSONIC V17 (17" 1280x1024 .28)             | 1125    |
| VIEWSONIC V20 (20" 1280x1024 .31)             | 2295    |
| MGC 15" 1280 NI                               | 399     |

**KEYBOARD,  
MOUSE  
& SCANNERS**

|                                         |          |
|-----------------------------------------|----------|
| MaxiSwitch/KeyTronic 101 Keyboard       | \$34/34  |
| OMNIKEY 101 NI/102/ Ultra               | 69/79/99 |
| LOGITECH MouseMan Ser/BUS NEW           | 59/62    |
| LOGITECH TrackMan Ser/BUS /PT           | 72/79/99 |
| MicroSoft Mouse Ser/BUS                 | 69/79    |
| Handy Mouse                             | 10       |
| Microsoft DOS 6.0/Microsoft Windows 3.1 | 45/49    |
| Focus FK 9000                           | 65       |

**MODEMS**

|                                                |         |
|------------------------------------------------|---------|
| 2400 bps Modem Int/Ext                         | \$32/68 |
| 2400 bps Data+9600 bps Send/Recv Fax Int Modem | 65      |
| Hi-Speed 14400 Fax                             | 159     |
| 9600 V.32 + MNP + V.42 bps Int/Ext Modem       | 285/399 |

**CONTROLLERS**

|                                             |         |
|---------------------------------------------|---------|
| DC-600B Cache IDE ISA                       | \$135   |
| DC-680 Cache IDE VLB                        | 169     |
| DC-620 Cache IDE EISA                       | 209     |
| DC-820 Cache SCSI EISA                      | 399     |
| Adaptec 1542/1522                           | 199/139 |
| IDE VLB Add-On                              | 45      |
| AT/IO (2S/1P/1G)                            | 14      |
| IDE 1:1 2HD/2FD Controller W/Cable          | 14      |
| IDE 1:1 2HD/2FD & 2S/1P/1G W/Cable          | 16      |
| IDE 1:1 2HD/4FD Controller                  | 45      |
| AT 1:1 MFM 2HD/2FD Controller               | 45      |
| Serial (RS232) Card/Parallel (Printer) Card | 13/14   |

**LOCAL AREA  
NETWORKS**

|                                    |         |
|------------------------------------|---------|
| Ethernet NE-1000/NE-2000 Coaxial   | \$55/65 |
| Ethernet NE-1000/NE-2000 10-Base T | 58/69   |
| ARCNET 8/16 Bit Coaxial Star       | 41/64   |
| ARCNET 8/16 Bit Twisted Pair       | 47/74   |
| MAXLAN Starter Kit (8 bit/16 bit)  | 185/199 |
| LANtastic AE-2/AE-3 Starter Kit    | 479/549 |
| LANtastic AE-2/AE-3 Adapter        | 219/249 |

**NEW  
Location**



## LTI Leopard Technology

INTERNATIONAL

624 E. EVELYN AVENUE, SUITE A SUNNYVALE, CA 94086

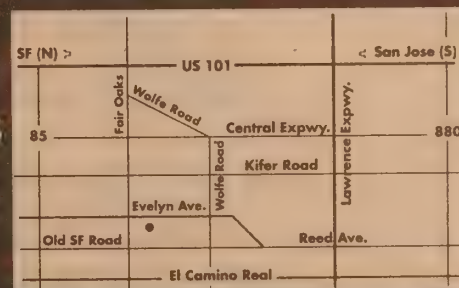
NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS. PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Prices reflect special discount

CALL FOR PRICES

**(408) 481-9288 FAX:(408) 481-0866**

**STORE HOURS**  
MON-FRI 9AM-6PM  
SAT 10AM-5PM  
SUN BY APPT ONLY  
SINCE 1987





# 1-2-3 FOR WINDOWS RELEASE 4

*To Help Illustrate Just How Significantly Lotus Improved 1-2-3 For Windows, They Jumped Directly From Release 1.1 To Calling This New Version Release 4*

**BY WOODY  
LISWOOD**

## **RESOURCES:**

**1-2-3 for Windows  
Release 4, \$495**

Lotus Development  
Corp.

55 Cambridge Pkwy.  
Cambridge, MA 02142  
(617)577-8500

**T**he newest version from Lotus, 1-2-3 for Windows Release 4, has rekindled my love affair with the spreadsheet. While not yet everything I desire, it is much closer than any other product currently on the market.

Earlier, while Lotus focused on the (dead-end) OS/2 marketplace, Microsoft brought out Excel for Windows. Needing a spreadsheet under Windows, I moved to Excel; but, using Excel always bordered on being an irritant. I did not like the way it did regression analysis and the way it handled formulas never seemed quite correct to me. After deciding that concentrating on OS/2 wasn't such a good idea, Lotus introduced 1-2-3 for Windows. My first reaction was "Wow, I can get back to working the way I felt comfortable." Unfortunately, the first version of 1-2-3W was slow, crashed too often, and generally did not feel comfortable in a GUI environment.

It was back to Excel. Then Wingz was introduced for Windows and I thought, "Now I'll get a *really good* GUI spreadsheet." But coming from the Mac environment, Wingz never felt like a true business product and did not appear to have the capabilities of my old Visicalc. Again I returned to Excel, waiting for a second try of Lotus's 1-2-3 for Windows. Release 1.1 was certainly an improvement—it was somewhat faster, worked with all my slashing—but still seemed confused about the GUI. I even thought about returning to 1-2-3 for DOS, but decided against this because I work almost completely under Windows these days.

Lotus has jumped from Release 1.1 to Release 4 for Windows and is telling us that Release 4 is the logical upgrade and enhancement of Release 3 for DOS. (And, in my opinion, they are absolutely correct.)

1-2-3 for Windows Release 4 really has won my heart back. All other spreadsheets are now banished from my disk. Everything works the way I would expect it to. For instance, I can run all of my normal

compatible with all their current work.

Spreadsheets need to be responsive. When I add a number to the spreadsheet, and have automatic calculation turned on, I don't want to have to wait for the spreadsheet to recalculate. I don't even want to feel that the spreadsheet is doing anything but instantly reworking my numbers. 1-2-3W meets this test admirably on both a 486DX 33mhz and a 486DX 50mhz. How much of that speed is the built-in math chip on the 486 computers and how much is due to the coding of 1-2-3W itself, I don't know, but I do know that I am feeling fine with its recalculation speed.

When Lotus acquired Samna and AmiPro, it acquired the best word processor available for DOS or Windows. It also acquired considerable knowledge and expertise of the GUI environment.

1-2-3W now offers AmiPro SmartIcons as a consistent part of the interface. SmartIcons, if you haven't used them, are icons, which when activated with a single mouse click, do something. They may only call up a menu item, such as activating the printing menu, or something more

complex like transposing a row into a column or a column into a row.

You can program a SmartIcon menu bar to contain the icons that best help you work. For example, with the 39-40 icons I am able to fit across my monitor, with a single click I can add a column, a row, bold face text, delete, undelete, cut, paste, center, justify, chart, spell check, and do whatever I need. If you can't remember what the icon does, a single click with the right mouse button puts a text description at the top of the screen.

**WHEN LOTUS  
ACQUIRED SAMNA AND  
AMIPRO, IT ACQUIRED  
THE BEST WORD  
PROCESSOR AVAILABLE  
FOR DOS OR WINDOWS.  
IT ALSO ACQUIRED CON-  
SIDERABLE KNOWLEDGE  
AND EXPERTISE OF THE  
GUI ENVIRONMENT.**

spreadsheet operations from the slash command sequence. Then, for printing I can return to the GUI environment for looks—fonts, lines, shading, and everything else I want to do with the spreadsheet.

Release 4 reads and writes almost all of the older 1-2-3 spreadsheet formats, which definitely helps at work where different versions of this program are in use. And, as everyone moves to Windows over the next year, their upgraded system will be fully



# EXPERIENCE + QUALITY = WEDGE TECHNOLOGY

## LOCAL BUS



## ShowBOOK IV: Mainframe Power w/ Expandability of VESA Desktop

- ShowBOOK IV with Intel 80486-33DX up to Intel 80486-66DX2
- 4MB, expandable to 20MB
- LOCAL BUS VIDEO
- 128KB External Cache (Optional)
- Built-in 16mm Trackball
- Simultaneous Internal & External Display and Keyboard
- Type III PCMCIA Slots
- 80/120/200/340MB HDD and 1.44MB 3.5" FDD
- Serial, Parallel, External CRT and Keypoint port
- 3 YEARS LABOR and 1 YEAR PARTS WARRANTY
- MULTIMEDIA DOCKING STATION (Optional)
  - Two 32-bit VESA LOCAL BUS Slots and Four 16-bit ISA Slots
  - One 5.25" and One 3.5" Drive Bay
  - Built-in SCSI Controller, 2 Serial, 1 Parallel, 1 Keyboard, 1 Video port

Intel 486-33DX  
4MB, 80HDD  
**ONLY**  
**\$1,869.00**

## ShowBIZ: THE 1ST NOTEBOOK WITH A 6 FOOT SCREEN

- Detachable VGA display for use w/OVERHEAD PROJECTOR
- Removable 80/120/210MB HDD and 1.44MB 3.5" FDD
- Intel 80386SL-25MHz with 64K Cache and 387SX/SL Socket
- External VGA adapter allows for two simultaneous displays
- Built-in Trackball, Serial, Parallel, and external Keyboard Ports
- 4MB RAM expandable to 8MB
- 2 Ni-CAD batteries, Automobile Adapter, Deluxe Carrying Bag
- ONLY 5.7 Lbs (Battery Included)
- Color Active Matrix Screen and Intel 486 version available
- Suspend/Resume Key to prolong battery life
- Internal 9600/2400 Send and Receive Fax/Modem (Optional)
- Ideal for Training, Sales, Lectures, Presentation, or any occasion you would like to impress your audience



## ShowBOOK: THE NOTEBOOK THAT KEEPS GOING & GOING...

- DUAL BATTERY Compartment
- 4-6 Hours battery life per charge
- REPLACE BATTERY WITHOUT HAVING TO TURN OFF THE SYSTEM
- 80486SLC-33MHz Notebook
- Best design Trackball with 2 buttons
- Graphical LCD System Indicator
- 2MB expandable to 8MB
- 80/120/200MB HDD and 1.44MB 3.5" FDD
- Serial, Parallel, External CRT and K/B port
- AUTOMOBILE POWER CONVERTER
- ONLY 3.7 Lbs, with 2 batteries only 5.5 Lbs
- Suspend/Resume Key to prolong battery life
- Internal 9600/2400 Fax/Modem (Optional)
- Color Version also available
- 3 YEARS LABOR and 1 YEAR PARTS WARRANTY

ShowBOOK  
486-33MHz, 2MB,  
80HDD  
**ONLY**  
**\$1,289.00**

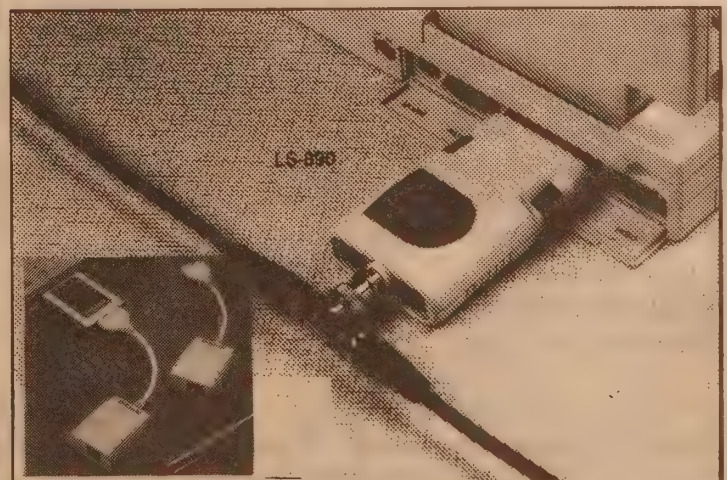


## Extra Strength POCKET LAN Prescribed for Networking Headaches!

- TWO-IN-ONE-DESIGN: Provides line interfaces for both 10Base-2 and 10Base-T environment. Supports both Distributed Bus and Star topology.
- ULTRA COMPACT SIZE: The best space saving solution for notebook, laptop, and PC users
- DIAGNOSTIC LEDS: For power on and data transmit/receive indication
- PRE-CONFIGURED DRIVERS: For Novell IPX, DOS, ODI, TCP/IP for Unix, SUN PC/NFS and NDIS
- AUTO-DETECTION SYSTEM: Easy Installation. No jumpers or configuration switches to be set.
- 3 YEARS LABOR and 1 YEAR PARTS WARRANTY

**ONLY**  
**\$169.00**

**PCMCIA Ethernet Card with 10BASE-T or 10BASE-2 ONLY \$195.00**



**WEDGE** SINCE 1981  
**TECHNOLOGY, INC.**  
Your Partner for Success

1657 McCANDLESS DRIVE, MILPITAS, CA 95035

Hours: M-F: 8:00AM-8:00PM/Sat: 10:00AM-4:00PM



**SALES: (408)263-9888**

**TECH: (408)263-0225**

**FAX: (408)263-9886**

Corporate PO's Welcome/Reseller Inquires Welcome



Also like its AmiPro sibling, 1-2-3W allows you to build specialized icon bars for particular tasks. 1-2-3W comes with a group of predefined icon bars that automatically change when you go into charting, for example, but you can define those icons to your needs. 1-2-3W also has an active control (or status) bar across the bottom of the screen. It tells the attributes of a document or spreadsheet and lets you easily make changes with a couple of clicks rather than going through the menu structure. And, of course, you can have a SmartIcon set up to do the same thing. Lotus 1-2-3 for Windows Release 4 really does let you work the way you want.

Release 4 also adds (according to the documentation—I did not bother trying to count them) 120 new @ functions and over two hundred new macro commands. Most of the @ functions are in the statistics area, and the new macro commands are there mostly to take advantage of the OLE, DDE, and GUI environment.

When you begin to edit under Release 4, the editing is done in the cell. I've had to

retrain my eyes, since they automatically jump to the data line at the top of the screen, but as I have been getting used to this, it really makes sense. Also, when you edit, a down arrow brings the edit cursor back into the spreadsheet so you can select a cell as if you were doing an original entry into the cell. When you do lots of large, complicated "if, then" type of lookups, with associated horizontal or vertical look up tables, it is really easy to make a mistake in entering the formula. The new editing procedures makes it much easier to correct a logic error.

Drag and drop editing is available. Highlight a range, hold down the mouse button, and drag the information to where you want it to be. Yes, it is as easy as that. After you have edited the data; designed a color, font, border, and style; and set everything to your exact needs, you can save that as a style so that you can apply the same attributes to other spreadsheets.

Another interesting feature is what Lotus calls the Version Editor. Using this

feature, I can create different sets of data, store them, and do what-if analysis without saving many different versions of the same spreadsheet.

In the charting arena, enhancements add a number of new chart types as well as better control over the size and placement of your chart pictorial.

And, saving the best for last in this article, spelling checking is now a SmartIcon away. And, to make things even more interesting, Lotus now installs a LOTUSAPPS director on your disk so that 1-2-3 can share spelling dictionaries with both AmiPro and, I assume, the new Freelance for Windows 2.0.

Like I said at the start, I'm back in love with Lotus 1-2-3W. It is nice to have my old flame back. In my opinion, Lotus 1-2-3 for Windows Release 4 is the best spreadsheet currently available for microcomputers. Whether you are upgrading from Excel or 1-2-3 for Windows Release 1.1, or just entering the Windows environment, 1-2-3 for Windows Release 4 should be the spreadsheet of choice. ■



## BERLIN TECHNOLOGY

1478 FRUITDALE AVE. SUITE #A SAN JOSE, CA. 95128  
TELEPHONE : (408) 297-7138 FAX : (408) 297-7302

DESIGN YOUR OWN PERSONAL PC  
OUR SYSTEMS ARE BUILT TO YOUR NEEDS

### 386DX-40 w/ 128k cache

- \* AMD 80386-40 CPU
- \* 4MB RAM
- \* AMI BIOS & Math-Co Socket
- \* Internal Clock / Battery
- \* TEAC 1.2 & 1.44 Floppy Drives
- \* IDE 2HD, 2FD & IO 2s, 1g, 1p
- \* 120MB IDE Hard Drive
- \* ET4000 SVGA VIDEO CARD
- \* SVGA Monitor 1024X768 .28dp
- \* 101 Enhanced Keyboard
- \* Fancy Mini Tower Case
- \* LOGITECH 400dpi Mouse
- \* 230 Watts Power Supply

**\$929.00**

### 486DX-33 w/128k cache

- \* INTEL 80486-33 CPU
- \* 4MB RAM 70ns
- \* AMI BIOS & Math-Co
- \* Internal Clock / Battery
- \* TEAC 1.2 & 1.44 Floppy Drives
- \* IDE 2HD, 2FD & IO 2s, 1g, 1p
- \* 120MB IDE Hard Drive
- \* ET4000 SVGA VIDEO CARD
- \* SVGA Monitor 1024X768 .28dp
- \* 101 Enhanced Keyboard
- \* Fancy Mini Tower Case
- \* LOGITECH 400dpi Mouse
- \* 230 Watts Power Supply

**\$1175.00**

### 486 SYSTEM OPTIONS

- 486-DX2-50 INTEL..... ADD \$ 90
- 486-50DX INTEL..... ADD \$ 140
- 486-DX2-66 INTEL..... ADD \$ 300
- VLB Mother Board, IDE & VIDEO....ADD \$ 82



INTRODUCING : Spider Graphic  
VESA LOCAL BUS  
WINDOWS ACCELERATOR CARD  
WITH 16.7MEG TRUE COLOR  
AT AN AFFORDABLE PRICE:



**SPIDER**  
Graphics, Inc.

### HARD DRIVES

- 40MB IDE HD.....call
- 80MB IDE HD....\$129
- 120MB IDE HD...\$157
- 130MB IDE HD...\$164
- 170MB IDE HD...\$180
- 210MB IDE HD...\$202
- 250MB IDE HD...\$235
- 340MB IDE HD...\$314
- 500MB IDE HD...\$648
- 1.2GB SCSI HD...\$call
- 2GB SCSI HD....\$call

### FLOPPY DRIVES

- 1.2MB FLOPPY.....\$44
- 1.44MB FLOPPY...\$42
- 2.88MB FLOPPY...\$72
- Dual Floppy 1.2 & 1.44  
.....\$122

### CONTROLLERS

- IDE 2Hd/2Fd 2s,1g,1p..\$15
- IDE Cache Controller...\$97
- VLB IDE 2HD, 2Flp....\$42
- MFM 2Hd/2Fd.....\$call
- Adaptec 1542C.....\$212
- Adaptec 1542bk Plus...\$297

### MOTHERBOARDS

- All 486D Motherboards come  
with INTEL CPU's
- ISA 386-33SX .....\$80
- ISA 386-33DX 64K...\$135
- ISA 386-40DX 128K..\$129
- ISA 486-25DX 128K..\$295
- ISA 486-33DX 256K..\$380
- ISA 486-50DX 256K..\$515
- ISA 486-66DX2 256k..\$585

### VIDEOS

- ATI Ultra Pro 1MB/VLB 2MB\$265/\$365
- ATI Graphic Ultra Plus w/2M.....\$275
- ATI Graphic Ultra w/ mouse.....\$207
- Cirrus Logic VLB w/ 1MB.....\$93
- Diamond Stealth Pro VRAM w/1MB..\$277
- Diamond Stealth 24x w/1MB.....\$159
- Diamond Stealth Pro VRAM w/2MB..\$299
- ET4000 Hi-Color w/ .....\$49
- Orchid Fahrenheit VRAM w/1MB..\$135
- Orchid P9000 VLB w/3MB..... \$319
- Spider Graphic VLB w/1MB.....\$92
- TRIDENT 256K/512K/1M...\$29/\$35/\$56

### MISCELLANEOUS

- Modem 2400.....\$27
- Fax modem 2400/9600 w/WinFax...\$49
- Logitech Mouse.....\$15
- Please Call For Other Accessories

### GREAT PRICING... GREAT SERVICE...

PHONE: (408) 297-7138 FAX: (408) 297-7302  
Hours: Mon-Fri 9:30-6:00 Sat-Sun 10:30-3:00

Prices and availability subject to change without notice.  
Not responsible for typographical errors.  
One year parts & three years labor on all systems.



Over 20 shipping points  
NATIONWIDE!

# FastLink Network Products

## Network Products for Less!



| Coax Ethernet                            |               |
|------------------------------------------|---------------|
| 3COM 3C503/16 ETHERLINK II 16-bit/5-Pack | 174/779       |
| 3C523B ETHERLINK/MCA/5-Pack              | 302/1,334     |
| 3C507 16-BIT ETHERLINK/5-Pack            | 317/1,405     |
| 3C509 ETHERLINK III/5-Pack               | 122/550/2,075 |
| INTEL ETHEREXPRESS 16/5-Pk/20-Pk         | 115/515/1,967 |
| INTEL ETHEREXPRESS 16 MCA                | 184           |
| NOVELL/EAGLE NE2000 PLUS                 | 145           |
| NOVELL/EAGLE NE2/2C 16-bit MCA           | 263           |
| SMC ELITE ULTRA Coax/6Pk/24Pk            | 112/672/2,371 |
| ETHERCARD ELITE/A FOR PS/2               | 198           |
| ELITE 32 Dual Segment EISA Coax          | 657           |
| 3COM 3C579 32-bit Coax/5-Pack            | 247/1,042     |
| INTEL ETHEREXPRESS 32-Bit EISA           | 465           |
| EAGLE NE3200 32-Bit EISA CX & TP         | 578           |
| EAGLE NE2/32C 32-Bit MC                  | 543           |

ARCNET CARDS AVAILABLE. PLEASE CALL

| 10 Base-T Twisted Pair Ethernet        |                   |
|----------------------------------------|-------------------|
| MILAN Transceiver (AUI-BNC)/(AUI-RJ45) | 49/49             |
| 3COM 3C503/16TP ETHERLINK II/5-Pk      | 184/800           |
| 3C507 ETHERLINK 16-bit TP/5-Pack       | 340/1,561         |
| 3C509TP 16-bit/5-Pk/20-Pk              | 122/550/2,075     |
| 3C509 COMBO/5-Pack                     | 155/700           |
| 3C523B 10 Base-T MC/5-Pack             | 352/1,583         |
| INTEL TP/MCA/5-Pk/20-Pk                | 115/186/515/1,967 |
| COMBO 16-Bit/5-Pack                    | 131/622           |
| COMBO (20-Pack)                        | 2,399             |
| FlashC 16-Bit/5-Pack/20-Pack           | 152/726/2,670     |
| SMC ELITE ULTRA 16TP/6-Pk/24Pk         | 112/632/2,371     |
| ELITE ULTRA COMBO/6-Pk/24-Pk           | 132/751/2,845     |
| ELITE 10T/A 10 BaseT MCA               | 198               |
| ELITE 32T Dual Segment EISA TP         | 657               |
| 3COM 3C579 EISA 10BaseT/5-Pack         | 247/1,042         |

| Token Ring                        |           |
|-----------------------------------|-----------|
| 3COM Tokenlink III 16/4           | 479       |
| 3COM Tokenlink III 16/4 10 Pack   | 4,498     |
| INTEL Token Express 16/4          | 460       |
| MADGE 16/4 Smart Ringnode/10-Pack | 613/5,219 |
| MADGE 16/4 EISA Ringnode/5Pk      | 853/3,758 |
| PROTEON 16/4                      | 438       |
| PROTEON 16/4 EISA                 | 494       |
| SMC Token Ring Adapter 16/4       | 361       |
| SMC Token Ring 16/4 12-Pack       | 4,103     |

See next section for Token Ring Pocket Adapters.

| PCMCIA/Parallel Port Adapters            |     |
|------------------------------------------|-----|
| IBM Credit Card Ethernet Adapter         | 296 |
| Credit Card 10BaseT Adapter              | 296 |
| Credit Card Token Ring 16/4 Adapter      | 628 |
| Credit Card 3270 Adapter                 | 543 |
| THOMAS CONRAD Ethernet                   | 299 |
| Credit Card 10 BaseT                     | 299 |
| Credit Card 16/4 Token Ring              | 619 |
| XIRCOM Pocket Adapter III BNC or 10BaseT | 305 |
| Pocket ENET III COMBO(BNC & 10BaseT)     | 330 |
| Pocket Token Ring TYPE1/TYP3             | 580 |
| 3270 Adapter for parallel port           | 439 |
| Credit Card Ethernet Adapter             | 290 |
| Credit Card 10BaseT Adapter              | 290 |
| Credit Card Combo BNC/10BT               | 330 |

| Wireless Adapters                     |      |
|---------------------------------------|------|
| ALPS RadioLan Parallel Port Adapter   | 444  |
| NCR Wireless 16-Bit Lan Adapter       | 733  |
| Wireless PS/2 Lan Adapter             | 641  |
| Wireless PCMCIA Adapter (New Product) | CALL |
| Security ROM                          | 90   |
| Proxim RangelAN/ISA 16-bit            | 418  |
| RangelAN PCMCIA Adapter               | 514  |
| RangelAN Parallel Port Adapter        | 514  |

| Macintosh Products                            |       |
|-----------------------------------------------|-------|
| ASANTE MC+IIEx4 Coax/MAC II                   | 158   |
| MC+30IE64 Coax/IIx1 & SE/30                   | 158   |
| Mini EN/SCPB Thick/Thin/10BT for Powerbook    | 340   |
| Mini EN/SC10TPB 10BaseT for Powerbook         | 296   |
| FriendlyNet FTNIIIS IIS, SE/30 Coax or 10BT   | 248   |
| FriendlyNet FTNII for NuBus Coax or 10BT      | 213   |
| Asante Lite Nubus-TN                          | 132   |
| Asante Lite Nubus-10T                         | 132   |
| Asante Lite LC-TN                             | 132   |
| Asante Lite LC-10T                            | 132   |
| CAYMAN Gatorbox Enet router, APL, AUI/BNC     | 2,025 |
| DAYNA DaynaPort E/II for II, IIX Coax or 10BT | 158   |
| DaynaPort SCSI/Link Coax or 10BT              | 288   |
| DaynaPort SCSI/Link-3 Combo                   | 352   |
| DP SCSI/Link PB for Powerbooks Coax or 10BT   | 311   |
| DP SCSI/Link PB3 Combo Coax/10BT/AUI          | 361   |
| EtherPrint T-Plus Print Server                | 433   |
| PathFinder Router (LocalTalk to EtherTalk)    | 651   |

We carry the full line of adapters from Asante, Dayna, & Farallon.

| Concentrators & MAUs                       |         |
|--------------------------------------------|---------|
| 3COM Linkbuilder TP/12                     | 426     |
| ASANTE 8-Port Concentrator/12-Ports        | 265/526 |
| ALLIED TELESIS 8 Port/12 Port              | 316/560 |
| EAGLE 4-port Hublet Mini-Repeater          | 228     |
| EXOS/MICRODYNE 16 ports                    | 621     |
| INTEL Int. TPE 12 port Hub ISA/EISA        | 565/641 |
| INTEL Hub Expansion Board (12 add'l ports) | 490     |
| SYNOPTICS 2800A 16 port w/ AUI             | 734     |
| SMC 3608TP 8-Port Concentrator/12-Ports    | 356/646 |
| SMC Elite 4000C Token Ring Mau 8-port      | 723     |
| SMC Elite 4000C Token Ring Mau 16-port     | 1,153   |
| MADGE 8 Station Token Ring Hub             | 490     |
| 3COM Linkbuilder TR 3C510180               | 1,914   |
| Linkbuilder TR 3C510182                    | 3,107   |
| Linkbuilder TR 3C510181                    | 3,682   |

| SNMP Manageable Concentrators                 |               |
|-----------------------------------------------|---------------|
| ASANTE 1012 12 ports Hub                      | 925           |
| ASANTE 1701 12 Ports w/SNMP module            | 1,065         |
| ASANTE View for Windows (In-Band/Out-of-Band) | 710           |
| ALLIED TELESIS 12 ports w/SNMP module         | 1,186         |
| 3COM Linkbuilder FMS TP Hub                   | 685           |
| FMS Isoview Software                          | 459           |
| FMS Management Module                         | 640           |
| FMS Isoview Management Option                 | 249           |
| DAVID SYSTEMS ExpressNet 12-port w/SNMP       | 1,248         |
| NETWORTH 3/6/10 Slot Chassis                  | 642/836/1,933 |
| 12 Port 10BaseT Module/Smart Module           | 1,234/1,791   |
| 24 Port 10BaseT Module/Smart Module           | 1,546/2,191   |
| Tri-Segment Module 24 ports                   | 1,546         |
| Tri-Segment Module w/ Mgmt 24 ports           | 2,191         |
| Tri-Segment Stackable 24 ports                | 1,230         |
| Tri-Segment Stackable 24 ports w/ SNMP        | 1,932         |
| Tri-Segment Management module (STMDB)         | 836           |
| Token Ring Module                             | 1,159         |
| NetWare App. Engine w/o NetWare Runtime       | 3,026         |
| NetWare App. Engine w/ NetWare Runtime        | 3,783         |
| Hubview SNMP mgmt. software (Windows)         | 950           |
| SYNOPTICS 2803 16 ports w/AUI                 | 955           |
| 2804 16 ports w/Fiber Optics                  | 1,177         |
| 2814-04 16 ports                              | 2,298         |
| 2814-05 16 ports                              | 1,818         |
| 3000N 12 Slot Chassis                         | 1,814         |
| 3308A 12 Port module                          | 1,182         |
| 3314A-03 Mgmt. module w/ basic SNMP           | 2,064         |
| 3314A-04 Mgmt. module w/ advance SNMP         | 3,266         |

| Repeaters                                                                                                        |       |
|------------------------------------------------------------------------------------------------------------------|-------|
| IMC LANextender BNC/BNC-limited to 1 per lan                                                                     | 325   |
| Dual Port Ethernet Repeater BNC/BNC                                                                              | 461   |
| Dual Port Repeater AUI/Fiber Optics                                                                              | 540   |
| Dual Port Repeater TP/Fiber Optics                                                                               | 540   |
| Quad Port Repeater (4 BNC)                                                                                       | 626   |
| TUTANKHAMON Long Distance Repeater. Link 1500' using one pair of TP cable, alternative to fiber, Requires 1 Pair | 1,446 |
| Dual Port Repeater BNC/BNC                                                                                       | 399   |
| Quad Port Repeater (4 BNC)                                                                                       | 599   |
| Octo Port Repeater (8 BNC)                                                                                       | 1,099 |

| Tape Backup Solutions                                                          |             |
|--------------------------------------------------------------------------------|-------------|
| CHEYENNE ARCserve VAP 5-10/ANY                                                 | 449/769     |
| ARCserve NLM V5.0 5/10/25 users                                                | 256/512/770 |
| ARCserve NLM V5.0 50/100/250 users 960/1,225/1494                              |             |
| ARCserve Solo                                                                  | 127         |
| COLORADO DJ-10 120MB Int. Tape Drive                                           | 161         |
| DJ-20 250MB Int. Tape Drive                                                    | 226         |
| JTC-10 120MB TRAKKER Para. Port Tape Drive                                     | 380         |
| JTC-20 250MB TRAKKER Para. Port Tape Drive                                     | 460         |
| Power Tape 25-2 GB SCSI Tape Drive w/Ctrl                                      | 1,055       |
| Power Tape Ext-25 2 GB SCSI Tape Drive w/Ctrl                                  | 1,251       |
| Power Tape 50-4 GB SCSI Tape Drive w/Ctrl                                      | 1,664       |
| Power Tape Ext 50-4 GB SCSI Tape Drive w/Ctrl                                  | 1,870       |
| CONNER (formerly Maynard/Archive/Cypher/Irwin) Backup Exec for DOS/NetWare NLM | 129/270     |
| Conner 7251QI 500 MB                                                           | 520         |
| Conner 6000DLT 48MB/Min                                                        | 3,882       |
| EXABYTE 4MM 4-8GB Workstation Based                                            | 1,478       |
| 4MM 4-8GB Server Based (NetWare 2.2) from                                      | 1,801       |
| 4MM 4-8GB Server Based (NetWare 3.11) from                                     | 1,608       |
| INTEL StorageExpress EL Ext. 2.2GB                                             | 5,961       |
| INTEL StorageExpress XL Ext. 5GB                                               | 9,464       |

| Uninterruptible Power Supplies   |                 |
|----------------------------------|-----------------|
| APC BACK-UPS 250/400/450         | 140/175/210     |
| BACK-UPS 600/900/1250            | 289/410/547     |
| POWERCHUTE PLUS for Novell/Unix  | 99/149          |
| SMART-UPS 400/600/600RM/900      | 310/375/470/589 |
| SMART-UPS 1250/1250RM/2000RM     | 736/869/1,376   |
| NSSI IPS/AI 450/600/800/1200     | 330/414/559/812 |
| Lansafe II for NetWare           | 135             |
| Net-UPS 450/600 for Novell/Unix  | 397/478         |
| Net-UPS 800/1200 for Novell/Unix | 634/870         |

| Bridges & CSU/DSU                            |       |
|----------------------------------------------|-------|
| ALLIED TELESIS Local Ethernet Bridge         | 1,449 |
| ALLIED TELESIS Local Ethernet Bridge w/ SNMP | 1,739 |
| NOVELL MultiProtocol Router 2.0              | 721   |
| 3COM NetBuilder Local Ethernet (Thick)       | 3,637 |
| NetBuilder Token Ring                        | 4,736 |
| NetBuilder Remote (Thick/Thin)               | 5,263 |
| INTELLICOM Enet Local, 2AUI, 2BNC, SNMP      | 1,300 |
| MADGE 16/4 Token Ring Bridge                 | 2,051 |
| PROTEON DNX 300i Token Ring to Token Ring    | 4,162 |
| DNX 300i Token Ring to Ethernet              | 4,162 |
| DNX 300i Token Ring to Dual Series           | 4,919 |
| RETIX 4850 Remote Bridge                     | 3,575 |
| SYNOPTICS 3323S Enet Local Bridge w/AUI      | 2,874 |
| SYNOPTICS 3522 Token Ring Bridge             | 5,677 |
| UDS DDS/MR1 Dual RS232C/v.35 w/interface     | 589   |

| Network Modems/Comm. Servers           |                       |
|----------------------------------------|-----------------------|
| ARTISOFT Aricom Modem Sharing          | 236                   |
| ARTISOFT Central Station               | 431                   |
| BRIGHTWORKS NetRemote+(100users)       | 359                   |
| MICROTEST Ethernet LANModem            | 1,439                 |
| MICROTEST Token Ring LANModem          | 2,050                 |
| NOVELL NetWare Access Services v1.3    | 1,735                 |
| NACS 2/8/16/32 ports                   | 431/1,300/2,170/3,468 |
| SHIVA NET MODEM/E 9600 BNC             | 1,567                 |
| Lanover 4E/8E ports w/o modems         | 1,843/2,650           |
| TELEBIT ModemMizer Software            | 227                   |
| Asyn Comm. Server 8/16 ports           | 2,875/4,313           |
| U.S. ROBOTICS Modem Sharing Kit V32BIS | 532                   |
| Dual Modem Sharing Kit                 | 937                   |
| Shared Access CommServ                 | 1,495                 |

| Network Printing Solutions                      |      |
|-------------------------------------------------|------|
| CASTELLE Jetpress BNC/10Base-T                  | 436  |
| Jetpress MIO for HP4                            | 419  |
| Lanpress BNC (2 PAR/2SER)                       | 662  |
| DIGITAL PROD. NETSprint/150E 3 Parallel Ports   | 638  |
| EAGLE NPE400 1 LPT, BNC & 10BT                  | 362  |
| INTEL Netport II for Ethernet (New Lower Price) | 396  |
| Netport II for 10BaseT (New Lower Price)        | 410  |
| Netport II for Token Ring (New Lower Price)     | 572  |
| NetportExpress XL for BNC/10BaseT               | 469  |
| NetportExpress XL for Token Ring                | CALL |
| MILAN Fastport 1P/1S, BNC/10BT                  | 459  |
| XIRCOM Print Server 1 LPT, BNC or 10BT          | 315  |
| XIRCOM TR Print Server                          | 580  |

| Network Fax Solutions                        |         |
|----------------------------------------------|---------|
| CASTELLE FaxPress 1 or 2 Line, BNC or TR     | CALL    |
| CHEYENNE FaxServe VAP/NLM                    | 655     |
| OPTUS FACSys NetWare Fax Server Software     | 720     |
| INTEL Satisfaction Modem 200/400             | 329/447 |
| Net Satisfaction for 8 fax boards (20 users) | 649     |
| Net Satisfaction (1000 users)                | 1,040   |
| DELRINA Winfax Pro for Networks              | CALL    |

| Network CD-ROM                               |       |
|----------------------------------------------|-------|
| MICROTEST DiscPort (Network SCSI CDROMs)     | 550   |
| MERIDIAN CD-Net for DOS (10 Users)           | 467   |
| CD-Net for NetWare (NLM-10 Users)            | 467   |
| CD-Net for NetWare (100 Users)               | 938   |
| CD-Net for NetWare (250 Users)               | 1,445 |
| MICRO DESIGN SCSI Express for NetWare, MDI   | 564   |
| SCSI Express for NW 2.X                      | 470   |
| SCSI Express for NW3.11, Non-MDI (20 Users)  | 977   |
| SCSI Express for NW3.11, Non-MDI (250 Users) | 1,429 |
| Ext. CD-Rom LaserBank 600CD                  | 665   |
| Int. CD-Rom LaserBank 600CD                  | 552   |
| ISA SCSI Adapter for 600CD                   | 348   |
| EISA SCSI Adapter for 600CD                  | 564   |
| SCSI Express w/ 1 CDROM w/o CTRL             | 1,229 |
| SCSI Express w/ 2 CDROM w/o CTRL             | 1,898 |
| SCSI Express w/ 3 CDROM w/o CTRL             | 2,606 |
| SCSI Express w/ 2x2 CDROM w/o CTRL           | 3,276 |

| RAID Solutions                            |        |
|-------------------------------------------|--------|
| CHANTAL Paragon Software                  | 640    |
| COREL RAID (Software Only)                | 716    |
| CORE INT. Micro Array Int. 510MB w/o CTRL | 4,181  |
| Micro Array 2XBOX w/ 1 510MB w/o CTRL     | 4,693  |
| Micro Array 2XBOX w/ 2 510MB w/o CTRL     | 8,876  |
| Micro Array Ext. 842MB                    | 5,981  |
| Micro Array Ext. 1684MB                   | 11,453 |
| ULTRASTOR 124F EISA/Controller Only       | 1,777  |
| MICROPOLIS Raidion 680 3 340MB            | 5,299  |
| Raidion 1340 3 670MB                      | 6,448  |
| Raidion 2060 3 1.03GB                     | 8,267  |
| Raidion 2680 3 1.34GB                     | 9,547  |
| Raidion 3500 3 1.75GB                     | 10,494 |
| Raidion 4200 3 2.1GB                      | 13,834 |
| Raidion ISA SCSI Adapter and Cable Kit    | 418    |
| Raidion EISA SCSI Adapter and Cable Kit   | 729    |

| Cable Testers & Supplies                  |         |
|-------------------------------------------|---------|
| RG58 & RG62 Ratchet BNC Crimper           | 75      |
| RJ-45 Crimper                             | 75      |
| RG58 Ethernet BNC-Crimp (100 pak)         | 125     |
| RG62 Arcnet BNC-Crimp (100 pak)           | 125     |
| RJ45 10 BaseT Connectors (100 pak)        | 40      |
| 10Base-T Cable (1000' min) LV3/LV 5       | 100/200 |
| BELDEN PVC RG58 or RG62 Cable (1000' min) | 175     |
| PLENUM RG58 or RG62 Cable (1000' min)     | 350     |
| MICROTEST Quick Scanner                   | 607     |
| MT310 TP/COAX Scanner                     | 1,142   |
| MT350 NEXT Scanner                        | 2,525   |

| E-Mail                                             |               |
|----------------------------------------------------|---------------|
| cc:MAIL DOS Platform V4.0                          | 214           |
| OS/2 Platform                                      | 359           |
| WINDOWS Platform                                   | 359           |
| Macintosh Platform                                 | 359           |
| Unix Platform (New Product)                        | 648           |
| 10 USERS license/25 Users/100 Users .250/612/2,387 |               |
| Gateway v3.21 (MHS)                                | 960           |
| MICROSOFT PC Mail v3.0 Server + 10 Users           | 479           |
| PC Mail 5/20/100 Users                             | 273/930/3,633 |
| MHS Gateway/PROFS                                  | 708/3,405     |
| SMTP/X400 Gateway                                  | 3,405/3,405   |
| FAX Gateway                                        | 1,419         |

| Novell Software                           |                     |
|-------------------------------------------|---------------------|
| UnixWare Personal Edition                 | 185                 |
| Lan WorkPlace for DOS Single/10 Users     | 290/1,445           |
| Lan WorkGroup 5/10/20 Users               | 1,125/1,866/2,613   |
| Lan WorkPlace for Macintosh (Single User) | 290                 |
| NetWare for Mac 5/20/100/200              | 347/626/1,397/2,096 |

| Network Utilities                             |             |
|-----------------------------------------------|-------------|
| BRIGHTWORKS Utilities for NetWare             | 359         |
| CHEYENNE Monitrix Network Mgmt.               | 583         |
| Inoculan (20/250 workstations)                | 326/655     |
| Utils for NetWare 286/386                     | 257         |
| CENTRAL POINT Anti-Virus NLM for NetWare 3.11 | 890         |
| DIRECT ACCESS Network Menu                    | 366         |
| FRESH TECHNOLOGY LAN Assist                   | 216         |
| AntiVirus Assist v1.0                         | 1,240       |
| FRYE NetWare Management v1.1                  | 339         |
| Early Warning System v1.1                     | 339         |
| Lan Directory v1.1                            | 339         |
| INTEL LanDesk Manager                         | 712         |
| KNOZALL SYSTEMS NLM Auto                      | 296         |
| File Wizard NLM 1/3/8 Server                  | 371/521/821 |
| File Wizard VAP 1/3/8 Server                  | 296/446/746 |
| NOVELL LanAnalyzer for Windows v2.0           | 925         |
| ONTRACK NetUtils 3.0                          | 234         |
| POWERCORE Network Scheduler 3 5 Users         | 275         |
| Network Scheduler 3 DOS/WIN 25 Users          | 830         |
| Network Scheduler 3 DOS ONLY 5/25 Users       | 176/485     |
| XTREE XTNET File Manager/Serv. Ext.           | 387/100     |
| XTREE Tools for networks                      | 543         |

| Peer-to-Peer Networking                    |              |
|--------------------------------------------|--------------|
| ARTISOFT Lantastic 5.0 A/I                 | 79           |
| AE-2 Adapter 16-bit Ethernet Adapter       | 217          |
| Noderunner Starter Kit 5.0 for DOS         | 477          |
| Noderunner Starter Kit for Windows         | 550          |
| Noderunner/C Coax 16-Bit Adapter           | 188          |
| Noderunner/A Combo 16-Bit Adapter          | 238          |
| Lantastic 5.0 for NetWare                  | 296          |
| Lantastic for Mac                          | 578          |
| Lantastic A/I for Win/6/12 users           | 139/540/1030 |
| Lantastic 5.0 for TCP/IP                   | 177          |
| Etherbasket AE-2 Adapters (12 pack)        | 2,172        |
| Etherbasket AE-3 Adapters (12 pack)        | 2,429        |
| NOVELL NetWare Lite 1.1                    | 79           |
| NetWare Lite coax starter kit (2 Stations) | 420          |
| NetWare Lite Add-On (1 Additional Station) | 210          |
| XIRCOM Network Simplicity Starter Pack     | 427          |
| Network Simplicity Add-On Kit              | 196          |
| MICROSOFT Windows for Workgroup            |              |
| Add-On Starter Kit 2 User/1 User           | 291/146      |
| Add-On for Windows 3.1 Software Only       | 69           |
| Add-On for Windows 3.1 (5 pack)            | 276          |

| Microsoft Windows NT             |       |
|----------------------------------|-------|
| Single User                      | 341   |
| Single License (Requires Server) | 293   |
| Advanced Server                  | 1,031 |
| Advanced Server License          | 879   |

| Optical Storage/WORM                    |       |
|-----------------------------------------|-------|
| PINNACLE MICRO Int. PMO 130PC EXT.128MB | 1,872 |
| PMO-650I INT.128MB, 19ms w/CTRL         | 3,008 |
| PMO-1300AT EXT. 2 650MB, 19ms, w/CTRL   | 5,802 |
| Ext. PMO-650E EXT. 650MB, 19ms w/CTRL   | 3,105 |
| Ext. MFO-650 EXT.15ms. WORM w/CTRL      | 3,362 |
| RCD-202 Recordable CD MAKER             | 3,864 |

- **LOWEST PRICE GUARANTEE!** ASK FOR DETAILS.
- **NOVELL, SCO, ARTISOFT** trained & authorized.
- Over 20,000 items from over 700 vendors. Call us for those hard to find items. Our computerized catalog can locate them within seconds.
- **VISA & MASTERCARD** Accepted. NEVER A SURCHARGE.
- Same day shipping & NEXT DAY guaranteed delivery available on most orders.
- Courtesy TERMS available to Government, Education, & Fortune 1500 Accounts.

## 1-800-788-LANS

HOURS: M-F 8:00 AM TO 6:00 PM PACIFIC TIME  
ADDRESS: 90 South Spruce Avenue, Suite N  
South San Francisco, CA 94080  
PHONE: 415-872-1376 FAX: 415-872-6634 CODE: MT310

- Fortune 1500 companies, Government, & Education P.O. accepted on approved credit.
- International orders accepted. Payment by Credit Card or Wire Transfer.
- Restocking fee applies to all non-defective returns and refused shipments. **OPENED SOFTWARE IS NOT RETURNABLE.**
- Prices & Specifications subject to change without notice.
- We are not responsible for typographical errors.
- Shipping & Handling charges will be added to all orders.
- Quantity pricing available for 10 units or more.

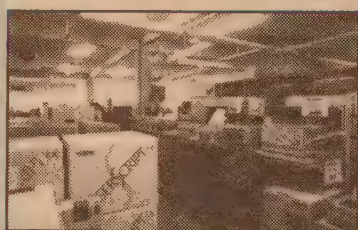




# FALL SPECTACULAR!



## Why ACCESS?



**7 Years of  
Business  
Experience**

**\$3 Million in  
Inventory**

**Located in  
the Heart of  
Silicon Valley**

**Over 2,000  
Line Items to  
Choose From**

**Well-Stocked  
18,000 sq. ft.  
Showroom**

**Factory Trained  
Technical Staff**

**Authorized  
Sales & Service  
for Most National  
Name Brand  
Products**

**Extended  
Warranty Available**

**STORE  
HOURS**  
**M-F 9-8**  
**SAT-SUN 10-5**  
(Pacific Time)

## The Powerful ACCESS Desktop Systems

ACCESS' high-speed machines provide exceptional performance and flexibility for long-term business needs.

Delivers multitasking capabilities for easy handling of simultaneous applications.

And above all, ACCESS systems feature top quality materials, construction, reliability and support to meet the standards of the most demanding customers.



*Featured in  
Computer Shoppers  
"Incredible 486 Deals"  
January '93!*

**FREE 300W  
Line Conditioner with any  
Access system purchased.**

### ACCESS VLB 486DX2-66

- ☐ 256K Cache, 4MB RAM exp. to 32MB
- ☐ AMI Bios ☐ 2 serial/parallel/game ports
- ☐ CPU cooling fan
- ☐ IDE hard/floppy controller
- ☐ Real-time clock/calendar
- ☐ 5.25" 1.2MB floppy drive
- ☐ 101 Enhanced keyboard
- ☐ Deluxe Desktop or Medium Tower
- ☐ 1 year parts & labor warranty

**\$999**

### ACCESS VLB 486DX-33

- ☐ 256K Cache, 4MB RAM exp. to 32MB
- ☐ AMI Bios ☐ 2 serial/parallel/game ports
- ☐ IDE hard/floppy controller
- ☐ CPU cooling fan
- ☐ Real-time clock/calendar
- ☐ 5.25" 1.2MB floppy drive
- ☐ 101 Enhanced keyboard
- ☐ Deluxe Desktop or Medium Tower
- ☐ 1 year parts & labor warranty

**\$799**

### ACCESS 386DX-33

- ☐ 128K Cache, 1MB RAM exp. to 32MB
- ☐ AMI Bios ☐ 2 serial/parallel/game ports
- ☐ IDE hard/floppy controller
- ☐ Real-time clock/calendar
- ☐ 5.25" 1.2MB floppy drive
- ☐ 101 Enhanced keyboard
- ☐ Deluxe Desktop or Mini Tower
- ☐ 1 year parts & labor warranty

**\$339**



## VLB-VESA Local Bus



### 486-33MHz

**High Quality GENOA Motherboard:**

- ☐ 4MB RAM exp. to 32MB on-board
- ☐ 256K Cache memory
- ☐ 2 serial, 1 parallel and 1 game port
- ☐ 101-key enhanced keyboard
- ☐ GENOA VLB IDE Controller
- ☐ CPU cooling fan
- ☐ 5.25" floppy disk drive
- ☐ Deluxe medium tower

**\$828**

**DX2-66Mhz \$999**

### AC-LINE CONDITIONER by CMS

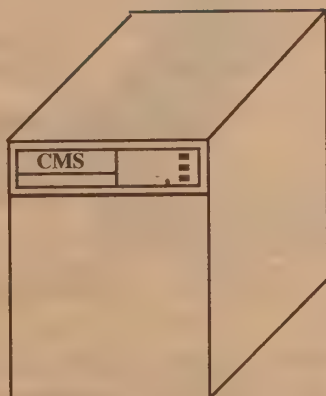
**Great Investment To Protect Your  
Expensive Power Sensitive Electronics!**

Such As:  
TVs, Stereos, Computers  
& much more...

**Provides a clean  
steady power level!**

**Eliminates  
surges & spikes!**

**Built-in  
surge protection!**



UC Listed • FCC Approved

|        |             |         |             |
|--------|-------------|---------|-------------|
| 300 VA | <b>\$49</b> | 1000 VA | <b>\$69</b> |
| 500 VA | <b>59</b>   | 3000 VA | <b>99</b>   |

### 486SLC2-50MHz

**High Quality ALARIS Motherboard:**

- ☐ 4MB RAM exp. to 16MB on-board
- ☐ 256K Cache memory
- ☐ 2 VESA Local Bus slots
- ☐ 101-key enhanced keyboard
- ☐ VLB IDE Controller
- ☐ 5.25" floppy disk drive
- ☐ Deluxe medium tower

**\$699**

ALARIS  
MANUFACTURED  
BY IBM



### CARDS

SUPPLIES LIMITED!

|                                       |      |
|---------------------------------------|------|
| IDE VLB CONTROLLERS ADH001 .....      | \$55 |
| PRODESIGNER IIs 1MB ADN296T .....     | 116  |
| FAHRENHEIT VA ISA 1MB ADN310 .....    | 180  |
| FAHRENHEIT VA VLB 1MB ADN310V .....   | 185  |
| FAHRENHEIT PLUS ISA 1MB ADN320 .....  | 125  |
| FAHRENHEIT PLUS VLB 1MB ADN320V ..... | 139  |

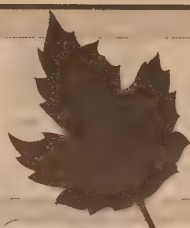


### 486 256K Cache MOTHERBOARDS

SUPPLIES LIMITED!

|                            |       |
|----------------------------|-------|
| DX-33/DX2-66 AM0266V ..... | \$198 |
| DX-50 AM0450V .....        | 205   |





# STOREWIDE SAVINGS!

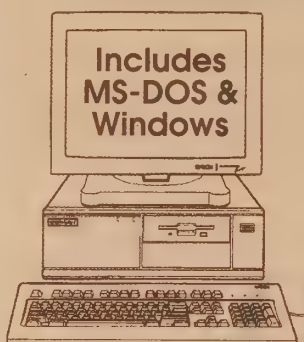
## EPSON®

WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY™

### Equity 4 Systems

#### Affordable High Performance!

- ☐ Support for Intel's OverDrive
- ☐ Zero Insertion Force sockets
- ☐ 4MB RAM exp. to 32MB
- ☐ 3.5" floppy drive
- ☐ 512K video DRAM exp to 1MB
- ☐ 4 ISA 16-bit slots
- ☐ 101 key keyboard & mouse
- ☐ Space saving design



Includes  
MS-DOS &  
Windows



\*Monitor not included

|                          |       |
|--------------------------|-------|
| 486SX-25 120MB HDD ..... | \$999 |
| 486DX-33 120MB HDD ..... | 1198  |
| 486DX-33 240MB HDD ..... | 1350  |

### PROGRESSION 486DX2/66

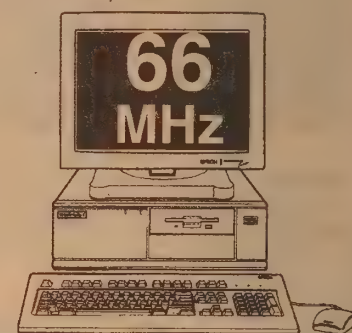
#### Born to Run Windows... The Fastest in its Class!

- ☐ Intel 486DX2/66 processor
- ☐ Built-in math coprocessor
- ☐ Epson's VirtualCache™
- ☐ 3.5" 1.44MB FDD
- ☐ Built-in 8KB cache
- ☐ 4MB RAM exp. to 36MB
- ☐ 6 16-bit I/O slots
- ☐ MS-DOS, Win. included
- ☐ Wingine™ graphics acceleration architecture
- ☐ Integrated serial, parallel, mouse & VGA ports

EPSON PROGRESSION  
wins "hands down" when  
compared to:  
☐ Compaq ☐ NEC ☐ DELL  
PC Magazine Jan. 26, 93 issue

## \$1472

\*Monitor not included



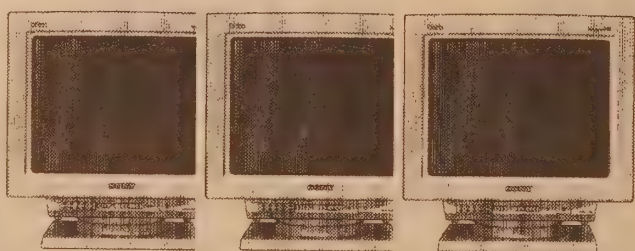
66  
MHz

### PROGRESSION 4 Systems

#### SMALLER FOOTPRINT THAN PROGRESSION!

|                           |        |
|---------------------------|--------|
| 486SX-33 120MB HDD .....  | \$1194 |
| 486SX-33 240MB HDD .....  | 1347   |
| 486DX2-50 120MB HDD ..... | 1534   |
| 486DX2-66 120MB HDD ..... | 1649   |

## SONY



### Trinitron Digital Control Color Monitor

GDM-2036

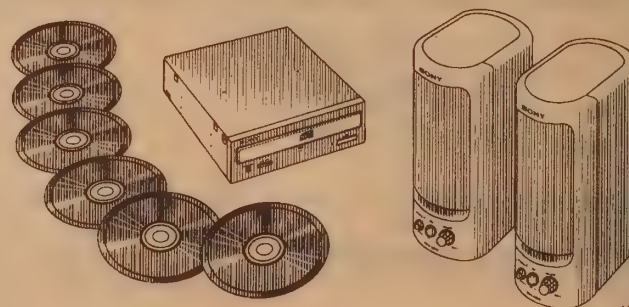
## \$1993

- ☐ 20" Super Fine Pitch™ Multiscan Trinitron color display
- ☐ .30mm aperture Grille pitch, 1280 X 1024 Non-interlaced
- ☐ Overscanning for crisp edge-to-edge images
- ☐ Sony Display Memory System
- ☐ Full compliance with Swedish MPR II standards

CPD-1430 14" 1024x768 .25mm .... \$599

CPD-1730 17" 1024x768 .25mm ..... 999

### Desktop Library Complete Internal Multimedia CD-ROM System



#HDS31C

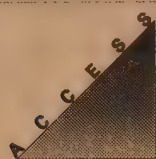
#### NEW LOWER PRICE!

- ☐ Caddyless, half-height internal drive with 550 ms access time
- ☐ Compatible with MPC & multisession Photo CD standards
- ☐ 16-bit sound/interface board
- ☐ Two Sony speakers with batteries
- ☐ Cable, software and more...
- ☐ Includes the following CD-ROM titles:

## \$444

- GeoWorks CD-ROM Manager, Tempura for Photo CD
- New Grolier Multimedia Encyclopedia-Great Wonders of the World Vol. 1
- Time Magazine Compact Almanac-Presidents: It All Started with George
- Where in the World is Carmen San Diego Deluxe





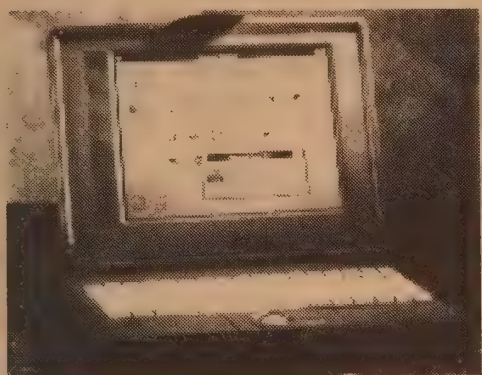
# ACCESS

COMPUTER TECHNOLOGIES

# 408-247-4444

2225 EL CAMINO REAL SANTA CLARA, CA 95050

Not responsible for typos / Price subject to change w/o notice / Price good through 10/17/93



# Acer



- ☐ MS-DOS 6.0
- ☐ Interlink transfer utility & cables
- ☐ Suspend utility
- ☐ 1 year 24-hour replacement in U.S.
- ☐ Ergonomic palm rest w/ integrated EasyTrac trackball
- ☐ MS-Windows 3.1
- ☐ Ultra VGA drivers

## Acer Note 730 486SX/25:

Mono 4 MB RAM 120MB HDD ..... \$1899

Passive Color 4 MB RAM 120MB HDD ..... 2499

## Acer Note 750 486SL/25:

Mono 4 MB RAM 120MB HDD PCMCIA slots ..... \$2182

## Acer Note 750C 486SL/25:

Active Color 4 MB RAM 120MB HDD PCMCIA slots ..... \$3699

Active Color 4 MB RAM 200MB HDD PCMCIA slots ..... 3899

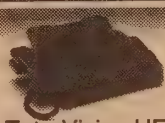
### MISCELLANEOUS

From... \$4<sup>99</sup>



|                                                  |                  |
|--------------------------------------------------|------------------|
| Bitstream FaceLift for Windows SSW861            | 4 <sup>99</sup>  |
| Xerox Presents software SSK001                   | 19               |
| Norton AntiVirus software SST213T                | 29               |
| NEC 15" Multisync Plus MTN1501                   | 299              |
| VGA Dimmer software                              | 6 <sup>99</sup>  |
| SuperStor compression software SST363            | 6 <sup>99</sup>  |
| CMS 60MB Internal Tape backup HTA060             | 49               |
| TEAC 40MB Internal Tape backup HTT040I           | \$69             |
| Video 7 Win . VGA Card ADN216                    | 89               |
| Everex EV-125 Magic 16 Card                      | 19               |
| Epson LQ Multi-Font Module PTE7407               | 2 <sup>99</sup>  |
| Fellows Anti-Glare Filter 91867                  | 12 <sup>99</sup> |
| Brother Color Kit M1824/1924 PXBCK100            | 29               |
| Thunder & Lightning Card ADS202                  | 129              |
| Brother Color Ribbon M18/19 series PXB9095       | 9 <sup>99</sup>  |
| Brother Film Ribbon M18/19 series PXB9097        | 9 <sup>99</sup>  |
| Citizen CSF GSX-145 CSF145                       | 29               |
| NEC Color Kit P62/6300 PTN500C                   | 29               |
| Inline Printer Buffer 256K XBS256                | 119              |
| Viewpoint 512K/1MB card ADN6230                  | 99               |
| Sydos 44MB Int. Removable w/ interface HDS44I    | 399              |
| PDP Pacific SI 1MB for Illsi PDP903              | 39               |
| HP II/III toner cartridge PXA201 *REMANUFACTURED | 39               |
| 256K exp. for DeskJet 500 series PTA500M         | 49               |
| Printer Muffler 132 column XTP132                | 29               |

### FAX MACHINES



From... \$1<sup>99</sup>

|                                   |       |
|-----------------------------------|-------|
| Tote-Vision HF-200                | \$199 |
| <b>w/CUTTER:</b>                  |       |
| Muratec M910                      | 339   |
| BellSouth 2600                    | 349   |
| Brother Intellifax 700            | 429   |
| Panasonic KX-F230 w/ ans. Machine | 469   |
| <b>w/MEMORY:</b>                  |       |
| Brother Intellifax 800M           | 499   |
| <b>INKJET:</b>                    |       |
| Panafax UF-312                    | 999   |

### CELLULAR PHONES

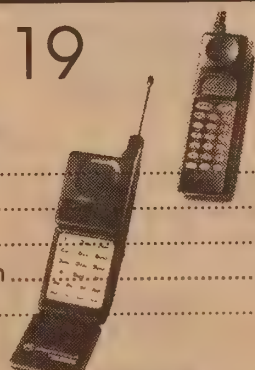
from... \$1<sup>19</sup>

#### MOTOROLA:

|                         |       |
|-------------------------|-------|
| 8000HX Handheld         | \$179 |
| 550 Flip Phone          | 295   |
| Micro TAC Lite          | 566   |
| Ultra Lite w/ Vibration | 760   |
| 2600 Mobile Unit        | 119   |

#### UNIDEN:

|                 |     |
|-----------------|-----|
| CP6000 Handheld | 179 |
|-----------------|-----|



### TELEPHONES

**Panasonic**

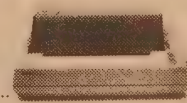


From... \$39<sup>89</sup>

|                                      |                     |
|--------------------------------------|---------------------|
| KX-T3170 3-LINE PHONE                | \$129 <sup>99</sup> |
| KX-T3165 2-LINE SPEAKER PHONE        | 75                  |
| KX-T4330 CORDLESS ANS. SYSTEM        | 137 <sup>55</sup>   |
| KX-T2100 DUAL CASS. ANS. MACHINE     | 59 <sup>95</sup>    |
| KX-T2720 INTERGRATED PHONE           | 139                 |
| KX-T8000 ALL DIGITAL ANS. MACHINE    | 169                 |
| KX-T1460 VOICE TIME/DAY ANS. MACHINE | 59 <sup>99</sup>    |
| KX-T1540 DUAL CASS. ANS. MACHINE     | 49 <sup>99</sup>    |
| KX-T3910 CORDLESS PHONE              | 115                 |
| KX-T3860 BLK. CORDLESS PHONE         | 129                 |
| KX-T2315 DESKTOP TELEPHONE           | 39 <sup>89</sup>    |
| KX-T2355 DESKTOP TELEPHONE           | 44 <sup>55</sup>    |

### PRINTERS

From... \$1<sup>2</sup>



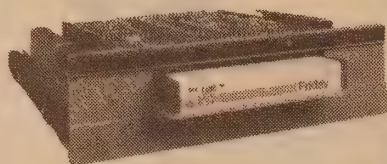
|                                  |      |
|----------------------------------|------|
| Atari Draft PTA001               | \$12 |
| Fujitsu DL-4600 PTF4600          | 229  |
| TI XL 16ppm Laser Printer PTT100 | 1299 |
| Newgen Turbo PS/400P PTN400      | 1599 |

Many items are clearance, demos or one-of-a-kinds. Some may be out-of-box and have no manuals. Most have original manufacturers warranties, certain restrictions may apply. Quantities are limited to stock-on-hand!



# THROUGHOUT THE STORE!

## Tape Backups



**COLORADO**  
MEMORY SYSTEMS INC.

### JUMBO Internal:

|                   |       |
|-------------------|-------|
| DJ-10 120MB ..... | \$137 |
| DJ-20 250MB ..... | 188   |

### TRACKER External:

*Operates Off Parallel Port!  
Ideal For Notebooks!*

|                   |       |
|-------------------|-------|
| JT-10 120MB ..... | \$298 |
| JT-20 250MB ..... | 388   |

**Robotics**  
The Intelligent Choice in Data Communications



**The Easy-To-Use Modem  
for People Who Think Like The Pros.**

*Sportster 14.4/96 Fax Modem*

|                |              |
|----------------|--------------|
| Internal ..... | <b>\$189</b> |
| External ..... | <b>209</b>   |

*Sportster 14.4/96 Modem*

|                |              |
|----------------|--------------|
| Internal ..... | <b>\$169</b> |
| External ..... | <b>189</b>   |

## Hard Drives

*Reliable High-Performance  
Magnetic Drives to Meet Your  
Most Demanding Jobs!*



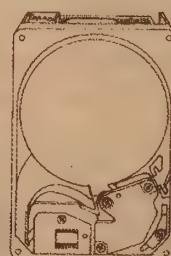
|                             |       |
|-----------------------------|-------|
| Conner 124MB 16ms IDE ..... | \$179 |
| Maxtor 130MB 15ms IDE ..... | 199   |



|                              |       |
|------------------------------|-------|
| Conner 170MB 15ms IDE .....  | \$175 |
| Maxtor 213MB 15ms SCSI ..... | 239   |

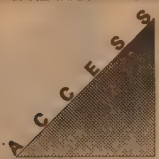


|                              |       |
|------------------------------|-------|
| Maxtor 245MB 15ms IDE .....  | \$229 |
| Conner 250MB 12ms IDE .....  | 249   |
| Conner 340MB 13ms IDE .....  | 329   |
| Maxtor 345MB 13ms SCSI ..... | 399   |
| Maxtor 345MB 14ms IDE .....  | 303   |



|                                  |       |
|----------------------------------|-------|
| Conner 513MB 12ms IDE .....      | \$749 |
| Conner 540MB 10ms IDE .....      | 649   |
| Maxtor 540MB 8.5ms SCSI II ..... | 899   |
| Maxtor 540MB 8.5ms IDE .....     | 899   |
| Maxtor 1.02GB 13ms SCSI .....    | 999   |
| Maxtor 1.2GB 8.5ms SCSI II ..... | 1499  |
| Maxtor 1.4GB 13ms SCSI .....     | 1599  |



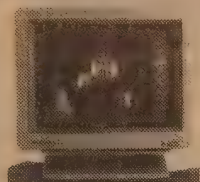


**ACCESS**  
COMPUTER TECHNOLOGIES

**408-247-4444**

2225 EL CAMINO REAL SANTA CLARA, CA 95050

Not responsible for typos / Price subject to change w/o notice / Price good through 10/17/93



*High Quality Monitors  
To Fit All Your Needs!*

## 14" Monitors

### Impression:

|                            |       |
|----------------------------|-------|
| IM1468M N/I 1024 .28 ..... | \$299 |
| IM3439SV .39 .....         | 219   |
| IM3428SV .28 .....         | 269   |

### NEC:

|                             |     |
|-----------------------------|-----|
| SVGA 1431 N/I .....         | 329 |
| 3FGE 1024 .28 60HZ .....    | 588 |
| Nanao F340iW 1024 .28 ..... | 699 |

|                           |     |
|---------------------------|-----|
| Sony 1304S 1024 .25 ..... | 468 |
|---------------------------|-----|

### Viewsonic:

|                       |     |
|-----------------------|-----|
| 1 .....               | 239 |
| 4e .....              | 319 |
| 5e .....              | 399 |
| 6e Dual Voltage ..... | 329 |
| 6FS NI 1024 .28 ..... | 555 |

## 17" Monitors

|                            |       |
|----------------------------|-------|
| Impression 1726N .26 ..... | \$888 |
|----------------------------|-------|

### Nanao:

|                      |      |
|----------------------|------|
| 9080i .....          | 868  |
| 550iW 1280 .28 ..... | 1150 |
| F550i .....          | 1050 |
| T560i 1280 .26 ..... | 1699 |

|                            |     |
|----------------------------|-----|
| Viewsonic 7 1280 .28 ..... | 899 |
|----------------------------|-----|

## 20" Monitors

### Nanao:

|                        |        |
|------------------------|--------|
| T660i 1280 .....       | \$2399 |
| F750i 1280 .31 .....   | 1950   |
| 760iW 1280 76 Hz ..... | 2099   |

|                        |      |
|------------------------|------|
| NEC 6FG 1280 .28 ..... | 2399 |
|------------------------|------|

|                            |      |
|----------------------------|------|
| Viewsonic 8 1280 .31 ..... | 1599 |
|----------------------------|------|

## GRAPHIC CARDS



|                             |       |
|-----------------------------|-------|
| ATI Ultraplus ISA 1MB ..... | \$299 |
| ATI Ultrapro ISA 2MB .....  | 399   |
| ATI Ultrapro VLB 1MB .....  | 329   |
| ATI Ultrapro VLB 2MB .....  | 479   |



DIAMOND  
Computer Systems, Inc.



BYTE



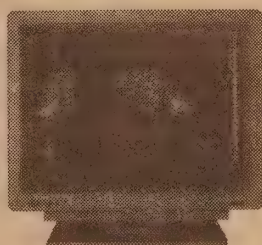
|                            |       |
|----------------------------|-------|
| SpeedStar VLB Pro 24 ..... | \$129 |
| Stealth 24 VLB 1MB .....   | 189   |
| Viper VLB 2MB .....        | 429   |



|                    |       |
|--------------------|-------|
| 8500 VLB 1MB ..... | \$149 |
|--------------------|-------|

## NANAO

### 17" SVGA Monitor



F550i

**SPECIAL  
BUY!**

**SAVE  
\$150!**

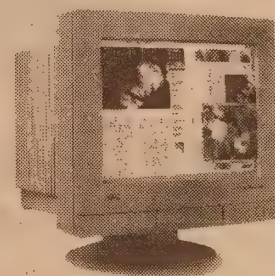
**\$899\***

- ☐ Up to 1280x1024
- ☐ .28mm dot pitch
- ☐ Flat screen
- ☐ Analog RGB input
- ☐ 1 year warranty
- ☐ Monitor is remanufactured\*

## NEC

### 15" SVGA Monitor

4FGe **\$698**



- ☐ 1024 X 768
- ☐ .28mm dot pitch
- ☐ 76Hz refresh rate
- ☐ 3 year parts & labor

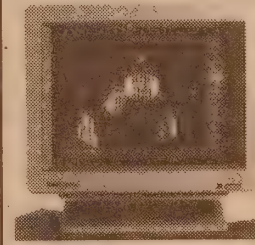
### 17" SVGA Monitor

5FGe **\$1088**

### ViewSonic™ 17

### 17" SVGA Monitor

**NEW!**



**\$1099**

### ViewMatch™ Color Control

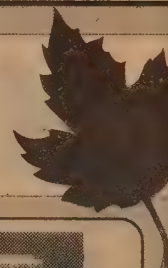
- ☐ Up to 1280x1024, 76Hz refresh
- ☐ .28mm dot pitch
- ☐ 30-82 kHz scan frequency
- ☐ Analog RGB input

**15" 1280 x 1024 ..... \$545**

**20" 1600 x 1280 ..... 1850**



# SAVE ON EVERYTHING!



## EPSON

WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY™

ActionNote™  
4SLC/33

*Fully  
Loaded!*



- ☐ 486SLC/33MHz
- ☐ Backlit LCD VGA
- ☐ DOS, Windows

- ☐ 4MB RAM
- ☐ Logitech trackball
- ☐ Carrying case

80MB HDD  
SUPER VALUE!!!

**\$1499**

120MB HDD  
24/96 Fax Modem

WinFax Lite ☐ BitCom software

**\$1750**

## EPSON

WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY™

• **30% LIGHTER**  
• **31% SMALLER**

Subnotebook

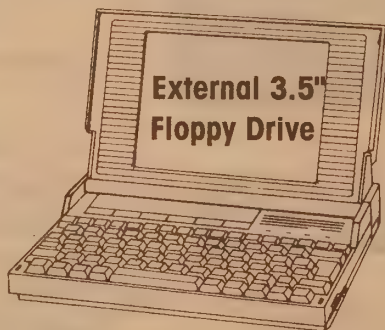
ActionNote™ 4000

- ☐ 486SLC/33MHz
- ☐ 1 PCMCIA II slot
- ☐ Backlit LCD VGA
- ☐ DOS, Windows

- ☐ 4MB RAM
- ☐ Removable HDD
- ☐ Built-in trackball
- ☐ Carrying case



Unbelievably Small,  
Weighing Under  
**FOUR Pounds!**



80MB HDD ..... **\$1899**  
120 MB HDD ..... **2099**

## NEC

UltraLite®  
Versa™ 25C

COLOR 486SL  
4MB RAM  
180MB HDD



*Great Features:*

- ☐ Built-in Local Video Bus
- ☐ Two PCMCIA Slots
- ☐ Removable Screen & HDD

**ACCESSORIES AVAILABLE**

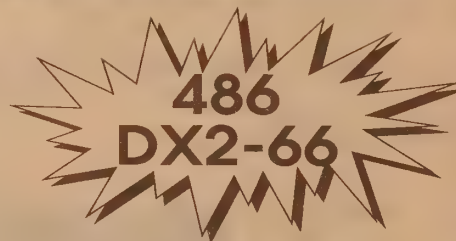
- ☐ T4 4/96 FAX MODEM
- ☐ 8MB UPGRADE
- ☐ DOCKING STATION
- ☐ ETHERNET PCMCIA
- ☐ STANDARD BATTERY
- ☐ NICAD BATTERY
- ☐ CARRYING CASE

- ☐ INTEL 486SL processor w/25MHz
- ☐ RAM exp to 20MB
- ☐ Brilliant color SVGA TFT active matrix display
- ☐ 64KB cache for enhanced performance
- ☐ Upgradable to pen system
- ☐ Up to 5 hours of battery life

**\$3899**

**VERSA 486SL/33MHz CALL!**

## COMMAX



- ☐ Built-in trackball
- ☐ Built-in 3.5" FDD
- ☐ Docking station interface

- ☐ Phoenix BIOS
- ☐ 9.5" screen
- ☐ Full function keyboard

**SMARTBOOK 486DX/33:**

Mono 4 MB RAM 120MB HDD ..... **\$1899**

**SMARTBOOK 486DX2/66:**

Mono 4 MB RAM 120MB HDD ..... **\$2156**

Mono 4 MB RAM 200MB HDD ..... **2399**

Active Color 4 MB RAM 120MB HDD ..... **3799**

Active Color 4 MB RAM 200MB HDD ..... **3966**





**ACCESS**  
COMPUTER TECHNOLOGIES

**408-247-4444**

2225 EL CAMINO REAL SANTA CLARA, CA 95050  
Not responsible for typos / Price subject to change w/o notice / Price good through 10/17/93

## BJ-200 Laser Quality... **Canon**

**At an InkJet Price!**

Takes Very Little Space!

4 out of 5 preferred the BJ-200 over HP!

**\$297**

44.2% faster  
than HP 500!



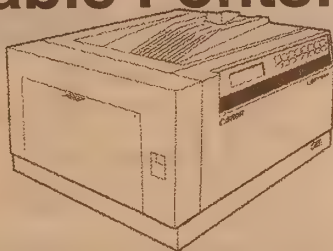
- ☐ Prints up to 248cps ☐ 7 resident fonts
- ☐ 100-page sheet feeder ☐ Hold up to 10 envelopes

## LBP-4SX Laser Beam Printer

Same as HP IIIp for \$259 Less!

**Scalable Fonts!**

**\$639**



- ☐ 4 pages per minute
- ☐ 1MB RAM, PCL 5
- ☐ Printer sharing
- ☐ Auto emulation switching

## INK JET PRINTER

**BJ-5 Portable  
Bubble Jet**

Identical to BJ-10ex!

SAVE \$110  
COMPARED TO  
BJ-10EX!

**\$138**

Unit is remanufactured\*

- ☐ Prints up to 83cps ☐ Text & graphics up to 360dpi
- ☐ Uses plain paper & transparencies ☐ 90-day warranty

## INK JET PRINTER

**BJ-10ex Portable  
Bubble Jet**

FREE  
Cut Sheet  
Feeder!

**\$249**

- ☐ Prints up to 83cps ☐ Text & graphics up to 360dpi
- ☐ Uses plain paper & transparencies ☐ 1 year warranty

## Canon NoteJet 486...

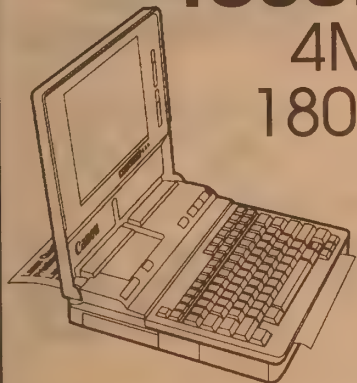
**Computer And Printer In One.**

The NoteJet™ 486 is a full-featured 486 notebook with a built-in high resolution Bubble Jet™ printer!

**486SLC-25MHz**

4MB RAM

180 MB HDD



Other Models Available

**CALL!**

Entire system w/battery  
Weighs Only 7.7 lbs.

- ☐ Powerful Full-Featured 486 Notebook
- ☐ High Quality Bubble Jet™ Printer Built-In
- ☐ 2 PCMCIA Expansion Slots
- ☐ Built-In 10 Sheet Letter Feeder
- ☐ Preloaded DOS, Windows & NoteJet tutorial, and more...

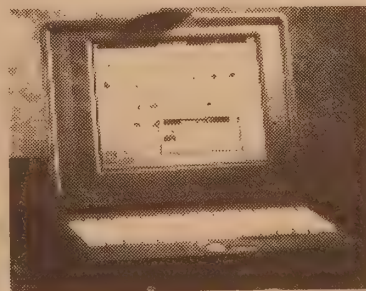
## Canon Innova 486NXM25...

**Fully Loaded!**

**486SX-25MHz**

4MB RAM

120 MB HDD



**NEW!**

**\$1795**

- ☐ Powerful 486SX 25MHz
- ☐ 4MB RAM ☐ 120MB HDD
- ☐ Fax Modem ☐ Built-in trackball
- ☐ Preloaded Software:  
DOS 6.0, Windows, Works & MicroFax



# WE'LL BEAT ANYONE'S ADVERTISED PRICE!

\*CERTAIN  
RESTRICTIONS  
APPLY. SEE  
STORE FOR  
MORE DETAILS.

## CREATIVE

CREATIVE LABS, INC.

### DISCOVERY CD™ 16 Upgrade Kit



- ☐ Sound Blaster 16 Sound Card
- ☐ Internal CD-ROM drive
- ☐ Stereo Speakers
- ☐ Software: Toolworks' Encyclopedia, The Animals, Lemmings, and more...
- ☐ Windows 3.1 and MPC compatible

8-Bit version \$349

**\$399**

### EDUTAINMENT CD™ 16 Upgrade Kit



- ☐ Sound Blaster 16 Sound Card
- ☐ Internal CD-ROM drive
- ☐ Stereo Speakers
- ☐ Software: Toolworks' Encyclopedia, The Animals, Secret Weapons of the Luftwaffe, Money Island, Loom, Carmen Sandiego & More...

**\$469**

### Sound Blaster \$159 Pro 16

|                                 |      |
|---------------------------------|------|
| Sound Blaster Deluxe            | \$68 |
| Sound Blaster Pro Deluxe        | 109  |
| Sound Blaster 16 ASP            | 199  |
| Video Blaster                   | 319  |
| Multimedia Starter Kit Internal | 377  |
| Multimedia External Upgrade Kit | 519  |

Microphone \$13

#### Shielded Stereo Speakers:

|                         |                                                                                     |    |
|-------------------------|-------------------------------------------------------------------------------------|----|
| 80 Watt Speakers ADS980 |  | 69 |
| 25 Watt Speakers ADS925 |  | 44 |
| 6 Watt Speakers ADS906  |                                                                                     | 14 |
| 4 Watt Speakers ADS902  |                                                                                     | 24 |



MEDIA VISION

### FUSION CD 16 SUPER BUNDLE!



- ☐ SONY internal CD-ROM Drive
- ☐ 4 Top CD Library Titles
- ☐ Pro Audio Spectrum 16 Sound Card
- ☐ Two Labtec Stereo Speakers
- ☐ And More...

**\$488**

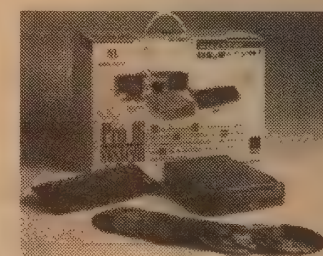
### FUSION DOUBLE CD 16



- ☐ Multisession Double Speed
- ☐ NEC internal CD-ROM Drive
- ☐ 350ms access time
- ☐ 4 Top CD Library Titles
- ☐ Pro Audio Studio Sound Card
- ☐ And More...

**\$599**

### PRO 16 MULTIMEDIA SYSTEM II



EXTREMELY FAST!

- ☐ Multisession Double Speed
- ☐ NEC internal CD-ROM Drive
- ☐ 250ms access time
- ☐ 8 Top CD Library Titles
- ☐ Pro Audio Studio Sound Card
- ☐ And More...

**\$859**

### Pro Audio Spectrum 16 \$159

Pro Movie Spectrum \$288

Pro Audio Studio 16 219





## CD-ROM DRIVES

**FREE CD-ROM Installation w/purchase!**

### SONY

CDU31A Internal  
490ms Access Time

**\$159**

### PANASONIC

562 Internal  
320ms Access Time

**\$269**

### TOSHIBA

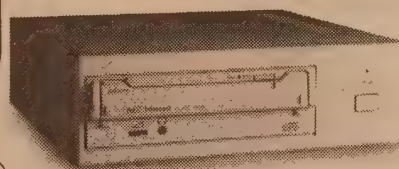
XM3401 Internal  
200ms Access Time

**FAST! \$399**  
EXTERNAL \$538

### TEXEL

DM-3024 Internal  
265ms Access Time

**FAST! \$359**



**CD  
CADDY  
\$6<sup>99</sup>**

### NEC SCSI Drives

CDR-84 Internal  
280ms Access Time

**FAST! \$395**

CDR-74 External  
280ms Access Time

**\$389**

## Hundreds of CD-ROM Software to Choose From... For Example:

### EDUCATIONAL TITLES:

#### Titles from \$13...

|                                             |           |
|---------------------------------------------|-----------|
| Animals 1.0 .....                           | \$21      |
| Barron's College Guide .....                | 26        |
| <b>Bring the World to Your Senses .....</b> | <b>13</b> |
| CIA World FactBook .....                    | 25        |
| Composer Quest .....                        | 29        |
| Desert Storm MPC .....                      | 22        |
| Dictionary of the Living World .....        | 31        |
| Dinosaur Adventure .....                    | 27        |
| Electronic Home Library .....               | 29        |
| <b>Family Doctor .....</b>                  | <b>23</b> |
| <b>Family Education Collections .....</b>   | <b>22</b> |
| Great Cities of the World vol. 1 .....      | 22        |
| Great Cities of the World vol. 2 .....      | 22        |
| Jets & Props .....                          | 25        |
| <b>Kodak Photo CD Access .....</b>          | <b>17</b> |
| Mavis Teaches Typing .....                  | 25        |
| <b>Mayo Clinic Family Health Book .....</b> | <b>25</b> |
| Microsoft Bookshelf .....                   | 49        |
| National Park .....                         | 22        |
| Mixed Up Mother Goose .....                 | 22        |
| Playing with Language English .....         | 27        |
| Playing with Language French .....          | 27        |
| Playing with Language German .....          | 27        |
| Playing with Language Japanese .....        | 27        |
| Playing with Language Spanish .....         | 27        |
| Presidents .....                            | 98        |
| Shakespeare .....                           | 16        |

|                             |           |
|-----------------------------|-----------|
| TIME Almanac 1991 .....     | \$21      |
| USA Wars: Civil Wares ..... | 36        |
| US Atlas/ World Atlas ..... | 18        |
| <b>US History .....</b>     | <b>26</b> |
| Vital Signs .....           | 98        |
| WINWARE vol 1 & 2 .....     | 22        |
| World Atlas v3.2 .....      | 18        |

### FUN AND GAMES:

#### Titles from \$14...

|                                            |           |
|--------------------------------------------|-----------|
| Arthur's Teacher Trouble .....             | \$29      |
| Arthur's Star for Windows .....            | 54        |
| Beyond The Wall Of Stars .....             | 26        |
| <b>Carmen San Diego .....</b>              | <b>25</b> |
| CD StoryTime .....                         | 19        |
| <b>CD Game Pack II .....</b>               | <b>25</b> |
| Chessmaster 3000 .....                     | 21        |
| Interactive Storytime Vol. 1 .....         | 25        |
| Jones in the Fast Lane .....               | 21        |
| <b>Killer Track CD-Music Library .....</b> | <b>18</b> |
| King's Quest V .....                       | 21        |
| Loom .....                                 | 21        |
| Macromedia Action for Windows .....        | 34        |
| Mario Is Missing .....                     | 25        |
| MIDI Music Shop .....                      | 22        |
| Monkey Island .....                        | 24        |

|                                      |           |
|--------------------------------------|-----------|
| Sherlock Holmes Consulting Det. .... | \$19      |
| <b>So Much Shareware I .....</b>     | <b>14</b> |
| <b>So Much Shareware II .....</b>    | <b>19</b> |
| Space Adventure .....                | 22        |
| Sports Best .....                    | 21        |
| Stellar 7 .....                      | 26        |
| <b>The 7th Guest MPC .....</b>       | <b>79</b> |
| The Shareware Concept .....          | 17        |
| Whale of Tale .....                  | 87        |
| Who Killed Sam Rupert .....          | 27        |
| Wizard MPC .....                     | 17        |
| PC Graphic & Sound Demo .....        | 17        |
| Peter and the Wolf .....             | 18        |
| Reference Library .....              | 22        |
| Renaissance Masters I MPC .....      | 30        |
| SFX-300 Sound Effects .....          | 17        |

### BUSINESS TITLES:

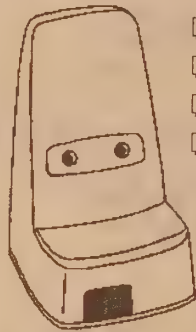
#### Titles from \$19...

|                                    |      |
|------------------------------------|------|
| American Business Phone Book ..... | \$19 |
| DTP Pro .....                      | 22   |
| Lotus 1-2-3 .....                  | 102  |
| Marketing Master 1992 .....        | 21   |
| Media clips 4 pack .....           | 49   |
| Microsoft Works .....              | 48   |
| Publish It 2.0 .....               | 26   |



# SUPER SAVINGS & SELECTION

## CORDLESS MOUSE by Z-NIX

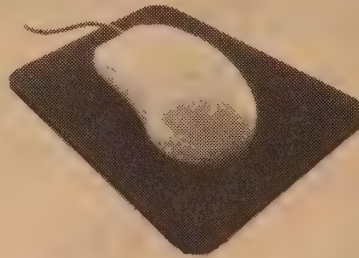


- ☐ Cordless super mouse
- ☐ Receiver/charging stand
- ☐ Mouse drivers
- ☐ Two recharagable batteries
- ☐ And more...

**\$39**

## Microsoft Mouse

*Fits the Way You Work-  
with Ergonomic Comfort!*



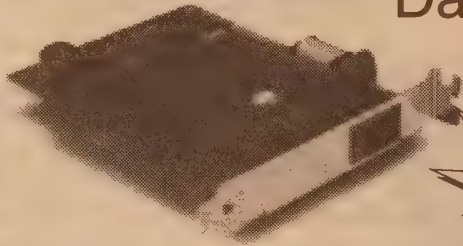
**\$69<sup>99</sup>**

PS/2 version \$89

Serial  
version

**WANG**

## 2400i Plus Internal Data Modem



**\$29**

- ☐ 2400bps
- ☐ RPI Based V.42 bis, MNP 2-5
- ☐ Easy-to-use Menus
- ☐ Includes Communications Software
- ☐ 10 Year Limited Warranty

**RHINO**

## Notebook/Laptop Carrying Case



Hard Protection/Soft Bag



CELLULAR ARMOR A high density thermoplastic with a double-wall honeycomb design which elastically disperses any shock. It protects valuable equipment from damage, shooting the shock out and away, and it is also a great insulator against the heat and cold.

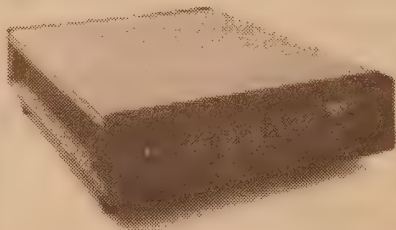
12 Models  
In stock!

Starting from... **\$39<sup>95</sup>**

Model AC-21

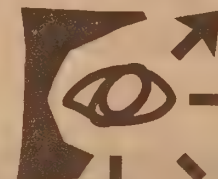


## 9648/24e External Fax Modem



**\$39**

- ☐ 9600S/4800R-2400bps Data
- ☐ RPI Based V.42 bis, MNP 2-5
- ☐ CCITT T.30 Group 3 Protocol
- ☐ Includes Comm. & Fax Software
- ☐ 10 Year Limited Warranty

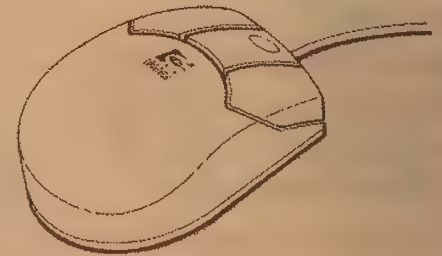


**LOGITECH**

## MouseMan™

High Resolution  
Serial PS/2 Mouse

**Special Price  
While Supplies  
Last!**

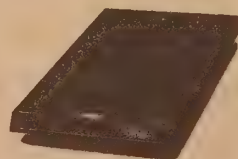


PMS015

**\$39<sup>99</sup>**

- ☐ 400dpi resolution
- ☐ 3 programmable buttons
- ☐ Ergonomic design
- ☐ MouseWare utilities
- ☐ Windows 3.1 compatible

**Hayes®**



**2400bps**

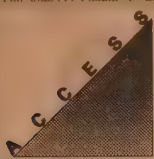
## External Modem

MADE IN  
USA

**Software  
Included!**

**\$39**





# ACCESS

COMPUTER TECHNOLOGIES

# 408-247-4444

2225 EL CAMINO REAL SANTA CLARA, CA 95050

Not responsible for typos / Price subject to change w/o notice / Price good through 10/17/93

## CPU COOLING FAN

Increase performance and extend the life of your CPU!



**\$19<sup>95</sup>**

#ICFAN

## FLOPPY DRIVES

**3.5"**  
**1.44MB**

by TEAC  
**\$54<sup>95</sup>**

#DSF145T

**5.25"**  
**1.2MB**

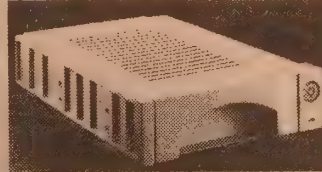
**\$59<sup>95</sup>**

#DSF005T

## MOBIL HDD RACK

**Fits all 3.5" IDE Hard Drives**

Allows easy installation & removal of hard drives. The perfect way to protect & transport all your valuable data!



**\$39**

#HDA001

## SIMM MODULES

1MBx9 60ns ..... \$CALL  
1MBx9 70ns 3 chip ..... CALL  
1MBx9 70ns 9 chip ..... CALL  
256Kx9 70ns ..... CALL  
4MBx9 60ns ..... CALL  
4MBx9 70ns ..... CALL

## MATH COPROCESSORS



Instant acceleration for your power applications.

80387SX ..... \$CALL  
80387DX ..... CALL  
80387SL ..... CALL

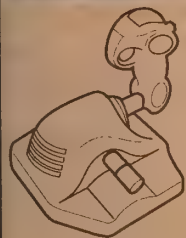
## CPUs



High Quality Chips!

486DX2-50 ..... \$CALL  
486DX2-66 ..... CALL  
486-33 ..... CALL  
486-50 ..... CALL

## JOY STICKS



by BONDWELL

AVIATOR

**\$26<sup>99</sup>**



INTRUDER  
**\$19<sup>99</sup>**

## CASES

Baby Desktop 200W ..... \$75  
Full Desktop 285W ..... 99  
Mini Tower 200W ..... 79  
Medium Tower 200W ..... 85  
Full Tower 220W ..... 109  
Super Tower 300W ..... 149

## I/O & IDE CARDS

AT I/O 2S/1P/1G ..... \$19  
IDE Controller ..... 19  
IDE w/ 2S/1P/1G ..... 29  
VLB IDE w/ 2S/1P/1G ..... 69  
VLB IDE Cache Controller... 199

## ETHERNET CARDS

**EtherLink III**  
**Parallel Tasking Network Adapter**  
by 3COM

- ☐ Featuring 3Com's New Parallel Tasking Architecture
- ☐ Remote Manageability with LinkWatch SNMP software
- ☐ Lifetime Warranty

16-bit coaxial cable NIE0163C **\$139**  
10BASE-T NIE0163T ..... 139

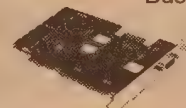
## UPS

Prevent Lost Data...  
With an Uninterrupted Power System

250VA ..... \$195  
550VA standby w/Novell adapter ..... 229  
300VA ..... 349  
1250VA w/ Indicator ..... 489

## SCSI CONTROLLER

**The SCSI Master**  
**Adaptec** ISA-to-SCSI High-performance  
Bus Master Host Adapter Kit



**\$289**

ADH1542B

- ☐ Features the **AHA-1542** SCSI host adapter
- ☐ Includes SCSIselect configuration firmware utility
- ☐ Provides support for HDD, removable, MO & CD-ROM SCSI peripherals
- ☐ Includes Adaptec's I/O operating environment support for DOS, Windows, OS/2, Netware and UNIX.

## MOTHERBOARDS

**ALARIS 486SLC2 50 MHz**  
**VESA Standard Local Bus!**

Includes CPU! **\$329**

**Alaris SLC2 Board Features:**

- ☐ 486SLC2 processor w/ 16KB internal cache
- ☐ 0K exp. to 16MB RAM on-board
- ☐ 64KB External RAM cache exp. to 128KB
- ☐ 2 VESA Local-Bus slots
- ☐ 7 16-bit & 1 8-bit ISA slots
- ☐ Mini-AT footprint ☐ 3 year warranty



Manufactured  
In USA by IBM

**GENOA 486**  
**VESA Standard Local Bus!**

**\$249**

- ☐ 256K cache
- ☐ 0K exp. to 32MB RAM on-board
- ☐ Pentium Chip socket
- ☐ 2 VESA Local-Bus slots
- ☐ 4 16-bit & 2 8-bit ISA slots
- ☐ Mini-AT footprint ☐ 2 year warranty

\*CPU not included!



**CHOOSE YOUR SPEED**  
**33,50, or 66MHz... by Jumper!**

**SILICON STAR 486**  
**VESA Standard Local Bus!**

**\$169**

- ☐ 256K cache
- ☐ 0K exp. to 32MB RAM on-board
- ☐ 2 VESA Local-Bus slots
- ☐ 5 16-bit ISA slots
- ☐ Mini-AT footprint ☐ 1 year warranty

\*CPU not included!



# DON'T FORGET TO STOP BY!

## NEC

• 600DPI  
• POSTSCRIPT II  
• HP PCL 5

**NEW!**

### Silentwriter® 1097

*Shared or Dedicated, There's No Better  
600 DPI PostScript™ Printer Value!*



POSTSCRIPT™

Silentwriter is a registered trademark of NEC Technologies, Inc.

**\$1499**

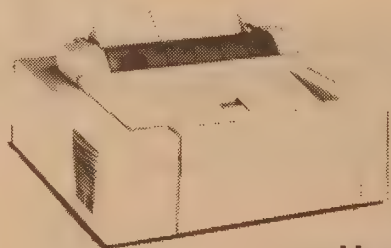
- ☐ 600DPI PostScript Printer
- ☐ Adobe PostScript Level 2
- ☐ HP III (PCL5) Emulation
- ☐ 10 Pages Per Minute
- ☐ 7 MB RAM Memory
- ☐ PhotoMatch™ Gray-scaling
- ☐ High-speed RISC Processor
- ☐ 250 Sheet Paper Tray
- ☐ Microfine Toner
- ☐ Built-in Convenience Tray
- ☐ Built-in Auto Emulation
- ☐ Includes AppleTalk™
- ☐ Optional 2nd Tray
- ☐ Optional Ethernet® & Token Ring

## NEC

**NEW!**

### Silentwriter® SuperScript 610

**Personal Laser Designed for  
Microsoft Windows Users!**



**\$629**

**Host Based Printing Using,  
CPU Processing Power!**

- ☐ 300dpi, 6ppm
- ☐ GDI plus PCL 4
- ☐ 2 year overnight replacement
- ☐ 34 scalable Truetype fonts
- ☐ Energy Star compliant

## NEC

**NEW!**

### Jetmate™ 1000

**Thermal Ink Jet Technology**

**High Quality Output...  
At a Budget Price.**



**\$289**

**Small & Compact  
12.5 lbs.**

- ☐ 300dpi, 300 cps in LQ mode
- ☐ Built-in 100 page feeder
- ☐ 128K RAM
- ☐ Windows 3.1 driver included
- ☐ 20 Free TrueType fonts
- ☐ Prints legal & envelopes
- ☐ HP Deskjet emulation
- ☐ 2 year parts & labor



**SAVE  
\$150**

## Panasonic

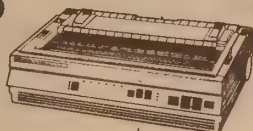
Office Automation

**20% OFF**  
Printer Accessories!  
\*Like Price  
In Stock Items Only

**KX-P1123**

The Lowest Letter  
Quality Available  
Today!

**\$149**



**KX-P1624**

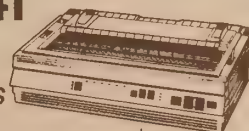
The Most Affordable  
Wide-Carriage Printer  
Available!

**\$249**

**KX-P1124i**

The Most Reliable  
Heavy Duty Business  
Printer Available!

**\$189**



**KX-P2123**

A Quiet Printer  
Offering a Color  
Option!

**\$179**

☐ 24-pin ☐ 240cps, 63cps LQ  
☐ 7 built-in fonts ☐ 2 year warranty

☐ 24-pin ☐ 192cps, 63cps LQ  
☐ 7 built-in fonts ☐ 2 year warranty

☐ 24-pin ☐ 300cps, 100cps LQ  
☐ 11 built-in fonts ☐ 2 year warranty

☐ 24-pin ☐ 240cps, 80cps LQ  
☐ 6 built-in fonts ☐ 2 year warranty

\*THESE ARE FACTORY REMANUFACTURED & FULLY GUARANTEED

**KX-P1124i** 24-pin, 300cps, 11 fonts **\$249**

**KX-P1150** 9-pin, 240cps, 7 fonts **139**

**KX-P1695** 9-pin, 330cps wide carriage **349**

**KX-P1624** 24-pin, wide carriage **329**

### The QUIET Series Printers

Come Hear the Difference! **43.5 dBA!**

2100 series Color Option \$49<sup>95</sup>

**KX-P2023** 24-pin, 240cps, 7 fonts **\$189**

**KX-P2123** 24-pin, 240cps, 6 fonts **229**

**KX-P2180** 9-pin, 240cps, 6NLQ fonts **155**

**KX-P2624** 24-pin, 300cps, 11 fonts **378**

### PANASONIC ACCESSORIES

**Toner KX-P4420** PTP451 **\$49**

**Toner 4410/4430** PTP453 **53**

**Toner 4450/I/55** PTP9450 **53**

**Devel. KX-P4420** PTPPDP2 **119**

**Devel. 4410/4430** PTPPDP4 **189**

**Devel. 4450/I/55** PTPPDP1 **145**

**Drum KX-P4420** PTPPDM2 **129**

**Drum 4410/4430** PTPPDM4 **155**

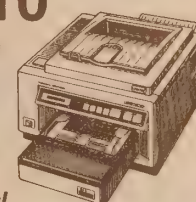
**Drum 4450/I/55** PTPPDM1 **225**

**KX-P4410**

Laser Printer

**5ppm!**

FREE Adobe  
Type Manager!



**NEW  
LOWER  
PRICE!**

**\$555**

☐ 512K RAM exp to 4.5MB  
☐ 200 sheet paper capacity  
☐ 300 dpi resolution ☐ 5 PPM

**KX-P4430** **\$649**

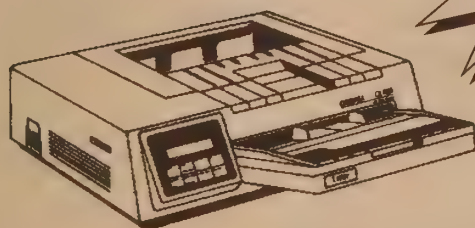
# OKIDATA®

## OL400

## LED Page Printers

**SAVE \$50!**

**\$479**



☐ 300dpi, resolution  
☐ 200 sheet paper tray  
☐ 17 resident fonts  
☐ 5 year printhead warranty

☐ 4 pages per minute  
☐ 512K exp. to 2.5MB  
☐ HP II emulation



## HEWLETT PACKARD

**DeskJet 500** Ink Jet

**Portable Ink Jet**

**IIIP**

4ppm, PCL-5

**4L**

**4ML**

**4**

8ppm, 600dpi, PCL-5

**4M**

6ppm PostScript MAC/IBM

**4Si**

17ppm, auto interface switch

### Toner Cartridges

**HP II/III**

**\$39\***

PXA201 \*remanufactured

**\$298**

**399**

**869**

**669**

**999**

**1349**

**1899**

**2995**

### COLOR PRINTERS

**DeskJet 500C**

**398**

**DeskJet 550C**

**588**

**DeskJet 1200C** Color 6ppm 2MB RAM

**1399**

### SCANNERS

**ScanJet IIP** with interface

**749**

**ScanJet IIC Color** with interface

**1295**



# FREE PRINTER STAND w/ ANY DOT MATRIX

\*W/ ANY DOT  
MATRIX  
PURCHASE  
XTP004

**20% OFF**  
Printer Accessories!  
(Low Price)  
In Stock Items Only



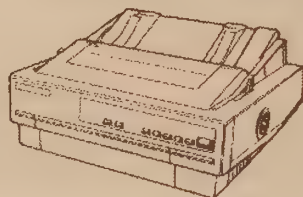
## EPSON®

WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY™

**\$50  
REBATE!**

### LQ-570+

**NEW!**  
Faster  
w/ more fonts!



- ☐ 24-pin, 337cps
- ☐ 14 built-in fonts
- ☐ 2 year warranty

**\$238**

|                                             |           |
|---------------------------------------------|-----------|
| AP-2250/3250 9-pin / 24-pin 80 column ..... | \$129/179 |
| LX-810 9-pin 80 column .....                | \$169     |
| FX-870/1170 .....                           | 279/359   |
| DFX-5000 9-pin SUPER FAST 530cps! .....     | 1350      |
| DFX-8000 9-pin SUPER FAST 1066cps! .....    | 2299      |
| LQ-870 .....                                | \$469     |
| LQ-1170 .....                               | 609       |
| LQ-2550 400cps .....                        | 899       |

### STYLUS 800 INK JET PRINTER



The look of laser printing  
at an affordable price.

Replacement  
Ink Cartridge  
PTE800C  
**\$19<sup>95</sup>**



**\$288\***

**STYLUS 300 Ink Jet \$249**

- ☐ Fast 150cps ☐ Crisp 360 dpi laser quality
- ☐ 7 typefaces w/ 4 scalable fonts ☐ Quiet 45dBA
- ☐ Compact footprint ☐ 100-sheet plain paper tray
- ☐ Prints envelopes with ease ☐ 2 year warranty

\*Price reflects a \$50 end-user mail-in mfr's. rebate, valid thru 10/31/93



### ActionLaser 1500

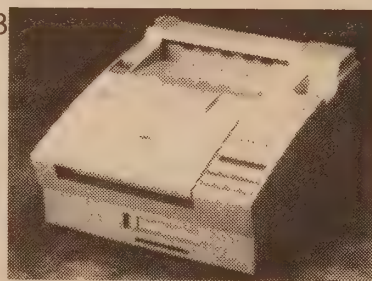
**Scalable!**

## EPSON®

WHEN YOU'VE GOT AN EPSON,  
YOU'VE GOT A LOT OF COMPANY™

**\$688**

- ☐ 6ppm ☐ 1MB Ram exp. to 5MB
- ☐ 14 resident, 13 scalable fonts
- ☐ 1 cartridge slot
- ☐ 150-sheet universal tray
- ☐ HP III/IIIsi, PCL-5 emulation
- ☐ 2 year warranty



### ActionLaser 1000

- ☐ 6ppm
- ☐ 512K Ram exp. to 6.5MB
- ☐ 14 standard fonts
- ☐ 1 cartridge slot
- ☐ 150-sheet universal tray
- ☐ HP IIP, PCL-4 emulation
- ☐ 2 year warranty

**\$599**

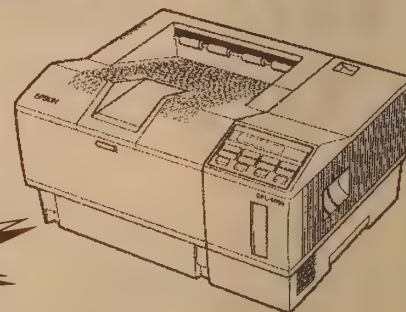
### EPL-8000

Great Features Such as:

- Scalable Fonts
- Printer Sharing
- And More...

**TWICE AS FAST AS  
HP IIIP (4ppm) FOR LESS!**

**\$868**



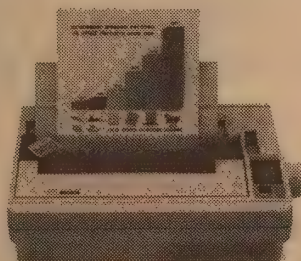
- ☐ 10ppm ☐ 1MB RAM exp. to 7.5MB
- ☐ PCL-5, 13 scalable fonts
- ☐ Includes RiTech for crisp, sharp images
- ☐ Built-in printer sharing ☐ 2-year warranty





**SPECIAL PURCHASE!  
BRAND NEW!**

**200GX  
DOT MATRIX PRINTER**



**\$129**

COLOR OPTION \$40

- ☐ 9-pin printer ☐ 240cps
- ☐ 5 built-in fonts ☐ Fontlocking feature
- ☐ Paper parking ☐ 2 year limited warranty

## PRINTER ACCESSORIES

### HP Series:

|                                 |     |
|---------------------------------|-----|
| IIP Cassette PTA200G .....      | 79  |
| III Letter Tray PTA812 .....    | 69  |
| III Legal Tray PTA810 .....     | 79  |
| III Envelope Tray PTA830 .....  | 89  |
| IV 250 Sheet Tray HP2085A ..... | 89  |
| IV 500 Sheet Tray HP2084B ..... | 109 |
| 4 Toner PTA401 .....            | 119 |
| 4L Toner HP92274A .....         | 85  |
| II/III Toner PTA201 .....       | 99  |
| IIP Toner PTA208 .....          | 79  |
| 3/4SI Toner PTA301SI .....      | 149 |

### OKIDATA:

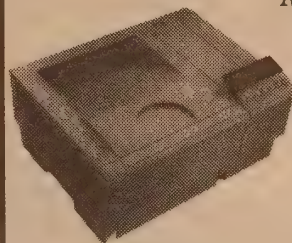
|                             |     |
|-----------------------------|-----|
| Toner 400/800 PTO800T ..... | 29  |
| Drum 400/800 PTO800D .....  | 199 |
| Toner 400e PTO400T .....    | 29  |
| Drum 400e PTO400D .....     | 149 |



*Get The Perfect Deal On  
The Laser Printer  
That's A "Perfect 10"*

**Silentwriter® 95f**

*MAC Compatible!*



POSTSCRIPT™

**\$949**

- ☐ 6 PPM, 2MB RAM exp. to 5MB
- ☐ 35 scalable Adobe fonts
- ☐ 14 bitmap & 8 scalable HP fonts
- ☐ HP LaserJet III w/PCL-5 emulation
- ☐ Auto Interface Monitoring for easy sharing

**Silentwriter 97 10ppm RISC \$1299**

Silentwriter is a registered trademark of NEC Technologies, Inc.

# OKIDATA® LED Page Printers



**IN STOCK!**



**OL810.**

*With OKI*

**Smoothing Technology™  
PCL-5 Scalable Fonts**

**\$929**

*The Best Value in Personal Printers*

- ☐ Compact size and sleek design fits comfortably on any desktop
- ☐ Fast 4ppm printing with RISC microprocessor for higher productivity
- ☐ 44 fonts for great-looking correspondence and reports
- ☐ Perfectly compatible with virtually all software applications

**\$499<sup>99</sup>**

- ☐ Industry's best warranty: 5 years on printhead, 1 year parts/labor on printer
- ☐ OKI Smoothing Technology™ for 1200dpi appearance
- ☐ 8ppm, 300dpi: crisp blacks, publication quality output
- ☐ 1 MB RAM exp. to 5MB, 13 HP III scalable fonts
- ☐ High-capacity 200-sheet paper tray included
- ☐ HP® Series III compatible
- ☐ Optional RS-232 Serial interface

OKIDATA Reg. T.M., M.D.; OKI Electric Industry Co., Ltd.; Windows T.M., Microsoft Corp.

|              |                                           |                    |
|--------------|-------------------------------------------|--------------------|
| <b>9-PIN</b> | • ML-320/321 300cps .....                 | <b>\$319 / 459</b> |
|              | • ML-520/521 auto form sensing ..         | <b>388 / 519</b>   |
|              | • ML-3410 Fast 550cps! 8-part forms ..... | <b>1288</b>        |

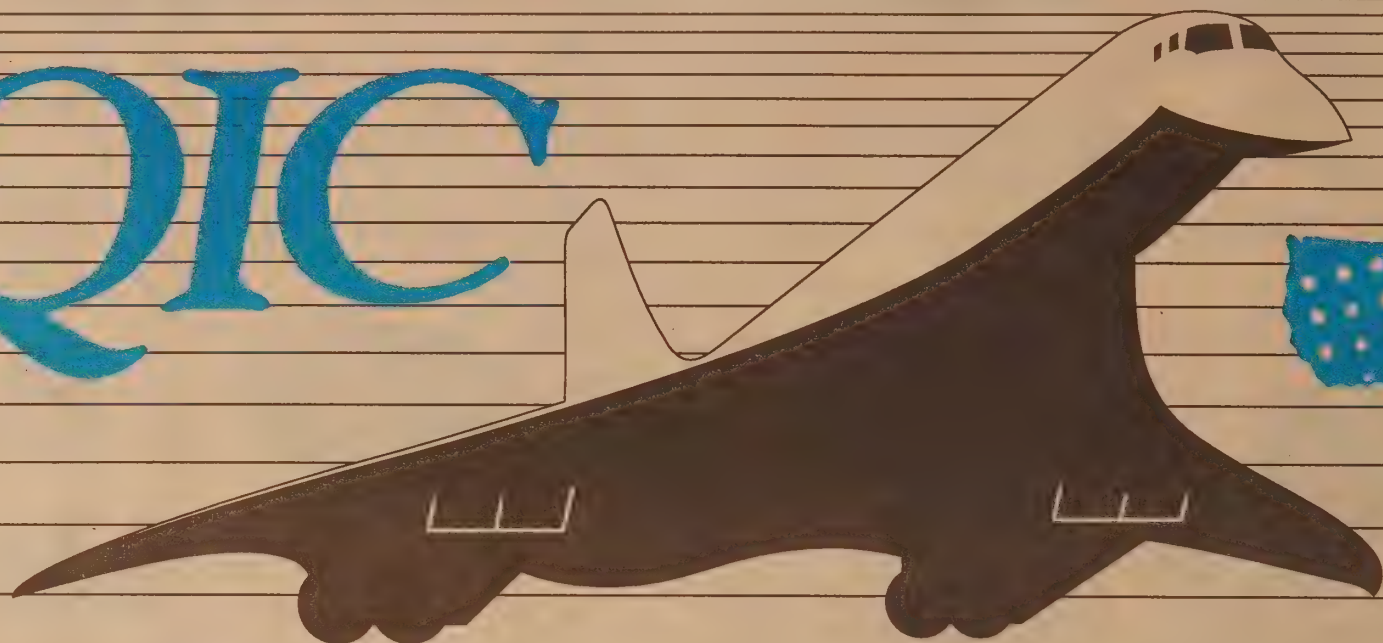
|               |                                           |                |
|---------------|-------------------------------------------|----------------|
| <b>24-PIN</b> | • ML-380 192cps, 63cps .....              | <b>229</b>     |
|               | • ML-590/591 auto form sensing .....      | <b>469/599</b> |
|               | • ML-395 NEW! Fast 607cps 5-PART FORMS .. | <b>988</b>     |



# Your Satisfaction Matters

2 Year Parts 1 Year Labor On All Systems

# QIC



## 486DX2-66MHz VLB Intel

- 4MB-70 RAM/256K Cache
- Teac 5.25" & 3.5" Drives
- 250MB Conner IDE 14ms
- Local Bus IDE w/IO
- Diamond Stealth 24VLB w/1MB S3-805 or Orchid Fahrenheit Plus VLB
- Mini Tower Case w/230W Power
- 101 Enhanced Keyboard
- MS DOS 6.0
- Windows 3.1 & Mouse
- 14" SVGA Monitor .28dp

**\$1699**

## 486DX-33/50MHz Intel

- 4MB-70 RAM/128K Cache
- Teac 5.25" & 3.5" Drives
- 120MB Conner IDE 15ms
- IDE w/2S, 1P, 1G
- Orchid Fahrenheit 1280 True-Color w/1MB VRAM
- Mini Tower Case w/230W Power
- 101 Enhanced Keyboard
- MS DOS 6.0
- Windows 3.1 & Mouse
- 14" SVGA Monitor .28dp

**\$1325/1450**

## 486SLC2-66MHz IBM

- 100% Compatible with OS/2
- 4MB-70 RAM/16K Internal Cache
- Teac 5.25" & 3.5" Drives
- 120MB Conner IDE 15ms
- IDE w/2S, 1P, 1G
- Trident 8900 CL SVGA Card 256 Color w/1MB
- Mini Tower Case w/230W Power
- 101 Enhanced Keyboard
- MS DOS 6.0
- Windows 3.1 & Mouse
- 14" SVGA Monitor .28dp

**\$1195**

## 486DLC-40MHz Cyrix

- 4MB-70 RAM/128K Cache
- Teac 5.25" & 3.5" Drives
- 120MB Conner IDE 15ms
- IDE w/2S, 1P, 1G
- Cirrus 5426 16.8 Million Colors 32-Bit Card w/1MB
- Mini Tower Case w/230W Power
- 101 Enhanced Keyboard
- MS DOS 6.0
- Windows 3.1 & Mouse
- 14" SVGA Monitor .28dp

**\$1145**

**Upgrade Specialist We Will Upgrade Any System**

### MONITORS

#### SVGA 14" Everview

|                  |       |
|------------------|-------|
| 14" SVGA .39     | \$195 |
| 14" SVGA .28     | 239   |
| 14" SVGA NI .28  | 269   |
| 14" SVGA NI 1280 | 289   |
| 15" SVGA NI 1280 | 405   |

#### Standard

|                  |     |
|------------------|-----|
| 17" VESA NI 1280 | 760 |
|------------------|-----|

#### MAG

|                    |     |
|--------------------|-----|
| 15" 15F 1280 x .28 | 525 |
| 17" 17F 1280 x .26 | 945 |

#### NANAO

|                        |      |
|------------------------|------|
| 17" F550iw 1280 x 1024 | 1019 |
| 17" F560i 1280 x .26   | 1650 |

#### NEC

|                        |      |
|------------------------|------|
| 15" 3FGe Flat 1024     | 650  |
| 15" 4FGe Flat 1024 NI  | 695  |
| 17" 5FGe 1024 x 768 NI | 1085 |
| 21" 6FGe Flat 1280 .28 | 2395 |

#### SAMPO

|                                |     |
|--------------------------------|-----|
| 17" KDM-1766 .31 1280x NI 74Hz | 707 |
|--------------------------------|-----|

#### SONY

|                           |      |
|---------------------------|------|
| 17" 1730 1024 x 768 .28NI | 995  |
| 20" 2038 1280x1024 .30NI  | 2295 |

#### VIEWSONIC

|                    |      |
|--------------------|------|
| 14" 5E 1280x .28NI | 365  |
| 15" 6E 1024x .28NI | 295  |
| 15" 15 1024x .28NI | 610  |
| 17" 17 1280x .28NI | 1145 |

**SPECIAL \$185 QTY LIMITED**

### DRIVES

|                            |       |
|----------------------------|-------|
| 120MB Conner IDE 16ms      | \$165 |
| 127MB Quantum IDE 16ms     | 180   |
| 131MB Maxtor IDE 15ms      | 185   |
| 170MB Conner IDE 15ms      | 195   |
| 170MB Quantum IDE 15ms     | 200   |
| 245MB Maxtor IDE 15ms      | 240   |
| 245MB Maxtor SCSI-2 15ms   | 275   |
| 245MB Conner IDE           | 255   |
| 340MB W.D. IDE 13ms        | 299   |
| 340MB Maxtor SCSI-2        | 375   |
| 520MB Fujitsu SCSI-2 12ms  | 675   |
| 520MB Fujitsu IDE 12ms     | 675   |
| 525MB Quantum SCSI-2 12ms  | 675   |
| 525MB Quantum IDE 12ms     | 650   |
| 1.0GB Toshiba SCSI-2 512K  | 980   |
| 1.2GB Toshiba SCSI-2 512K  | 1030  |
| 2.1GB Fujitsu SCSI-2 5.25" | 1825  |
| 1.08GB Fujitsu SCSI-2 10ms | 1050  |

### TAPE BACKUPS

|                |       |
|----------------|-------|
| Colorado DJ-10 | \$145 |
| Colorado DJ-20 | 179   |
| Trakker 120    | 295   |
| Trakker 250    | 350   |

### MOTHERBOARD W/CPU

|                         |           |
|-------------------------|-----------|
| 486/66 DX2 128/256K VLB | \$578/598 |
| 486/50 DX 128/256K ISA  | 478/498   |
| 486/33 DX2 256K VLB     | 398       |
| 486/66 DX2 128/256K ISA | 548/568   |

|                           |         |
|---------------------------|---------|
| 486/33 DX 128/256K ISA    | 348/368 |
| 486/66 SLC2               | 300     |
| 486/33 DLC 64/256K        | 190/220 |
| 386/40 DX 128K Opti       | 130     |
| 386/33 SX                 | 79      |
| 486/66 DX2 256K EISA VESA | 868     |
| 486/33 DX 256K EISA VESA  | 668     |

### ADD-ONS

|                           |      |
|---------------------------|------|
| IDE 2HD/2FDC              | \$15 |
| IDE W/2S, 1P, 1G          | 20   |
| IDE W/4FDC (2.88)         | 50   |
| IDE W/IO 32 bit VLB       | 36   |
| IDE W/16550 IO            | 50   |
| AT/IO 2S, 1P, 1G          | 15   |
| MGP                       | 15   |
| AT/IO W/2 16550 UR        | 40   |
| SCSI Always SCSI          | 189  |
| Desktop Case w/200W       | 70   |
| Mini Tower Case w/230W    | 50   |
| Mid Tower Case w/230W     | 70   |
| Mid Tower w/2 Fan Classic | 90   |
| Super Full Tower w/250W   | 160  |
| 2400Modem (Internal)      | 30   |
| 96/96/24 Fax Modem (IN)   | 50   |
| 14.4/14.4 Fax Modem (IN)  | 145  |
| 9600 External Modem       | 100  |
| 14.4/14.4 Fax Modem (EX)  | 175  |

### CD ROM/SPEAKERS

|                          |       |
|--------------------------|-------|
| Mitsumi 005              | \$160 |
| Sony 31A                 | 160   |
| Panasonic CR562          | 299   |
| Philips CM205            | 249   |
| Toshiba MK3401B          | 439   |
| Texel DM3024             | 369   |
| NEC CDR74                | 575   |
| Sound Galaxy NX Pro 8bit | 120   |
| Sound Blaster Pro 8bit   | 125   |
| Sound Blaster Pro 16 ASP | 189   |

### UPGRADES

Your 286 to 386/40 128K Cache w/4MB Only \$300  
Your 286 to 486-33 64K Cache w/4MB Only \$400

### WARRANTY & SERVICE

- 2 Year Parts & 1 Year Labor on Systems
- Worldwide On-Site Available
- Every configuration tested by our technical staff for a minimum of three weeks to ensure quality and compatibility
- 1 Year on components purchased without system
- Prices subject to change without notice
- Not responsible for typographical errors

**PC+TEN**  
A Super Computer Co.

Albany • Berkeley  
1533 Solano Ave.

**510/527-1388**  
FAX 510/527-7006

El Sobrante  
3767 San Pablo Dam Rd.

**510/758-8455**  
FAX 510/758-8492

Oakland • San Leandro  
1933 Davis St. #262

**510/568-1688**  
FAX 510/568-6888



# Volunteers Across The Networks

*Most Of The Open, Distributed Networks We Know Today Wouldn't Exist In Their Current Forms, And Probably Wouldn't Exist At All, But For Volunteers*

BY JOHN S. QUARTERMAN and SMOOT CARL-MITCHELL

Many people seem to be under the impression that the Internet is a monolithic entity run and supported by the US government, and that all its protocols and software have been designed, specified, and written by committees of bureaucrats and academics. The first part of this supposition is just plain wrong, the Internet long ago outgrew the control of any government as it spread into more than fifty countries, and government funding accounts for only a tiny fraction of the costs of operating its more than thirteen thousand constituent networks.

The second part of the supposition does hold some truth. Internet standards for protocols that require software implementations are written and approved by committees. However, those committees are often started and populated by people who were writing the protocols or software anyway. And, with or without a committee, a protocol doesn't have to be an "official" standard to be used or even to become widespread on the Internet.

comments. The authors are solely responsible for the content of this article.)

## EXAMPLES

Here are some examples of useful network facilities or technologies that were essentially produced by volunteers. We'll discuss general characteristics afterwards.

## DISTRIBUTED ELECTRONIC MAIL

Electronic mail existed on single timesharing systems as early as the late 1960s. Mail across a distributed network was invented on the ARPANET in 1972 or 1973. This was not in the original plans for the ARPANET, but was implemented by ARPANET researchers who wanted electronic mail and just did it. Quite likely, they did this work on paid time as part of their research, so it is stretching the meaning of the word to call them volunteers. But they knew they were stretching the mandate of their

with some opposition from system and network administrators. Nonetheless, it survived several attempts to suppress it, and continues to this day. Most other mailing lists and moderated newsgroups are also run by volunteers.

BITNET LISTSERV is perhaps the most capable mailing list distribution, subscription, and archive service on any network. It was written by a high school student as a volunteer project.

## UUCP

UUCP, the original UNIX to UNIX CoPy protocol, may not have been a volunteer project, but it had a common characteristic of such projects: it was written as a stopgap measure until something better came along. But nothing better was available, so it was included with UNIX, and became the most widespread UNIX dialup network protocol. Ever since then, many volunteers (and a few paid people) have attempted to patch its problems and make it work in all sorts of

There are probably ten thousand anonymous FTP servers on the Internet, but how can you tell which one contains the program or archive you need right now? This was a perennial question until volunteers wrote archie software to poll these servers and to make this set of indexes available from a single site.

Many useful and interesting Internet facilities have been developed by people who saw a need and filled it. While many of them were volunteers with no funding, many others were creative in uncovering funding sources. This phenomenon is not limited to the Internet, either. It is widespread throughout the worldwide Matrix of computers that exchange electronic mail and other services. (Thanks to Jeffrey Shapard, Michael Robin, and others for

research grants, too. Later they would also invent electronic mailing lists.

## MAILING LISTS

SF-LOVERS, for science fiction, was the earliest of the large electronic mailing lists and has been run by volunteers since its beginnings in 1977 on the ARPANET. In its early years it consumed noticeable amounts of network and system resources, and met

environments. Ports to non-UNIX operating systems, such as MS-DOS and VMS are often done by volunteers.

## NETWORKING AND THE MATRIX

Networking is connecting computers together so that people can use them to communicate, or to share resources such as files. The Internet is one way of networking; the Matrix of computers that exchange elec-

Copyright © 1993 by MIDS (Matrix Information and Directory Services, Inc.). All rights reserved. An earlier version of this article originally appeared in Volume 1, Number 4, (July 1991) of Matrix News, the monthly newsletter of MIDS, which looks at the contextual issues crossing network, geographic, and political boundaries.



tronic mail or other services includes many other ways.

**Fido:** When inexpensive but reasonably fast microcomputers became available around 1983 and 1984, some of their users wanted a version of UUCP for working with MS-DOS. The UUCP specifications were not publicly available at the time, so something new was written by a volunteer—Fido. FidoNet has since spread all over the world, with various updates, additions, and new application protocols, mostly written by volunteers.

**BBS systems:** Most BBS software and systems are run by volunteers. Even those with some funding often spend much more time than they are paid for.

**XMODEM:** An early BBS in Chicago spawned XMODEM, which has been modified and enhanced by others, mostly volunteers, giving us XMODEM-CRC, XMODEM-1k, YMODEM-batch, and ZMODEM.

**Kermit:** This is the quintessential volunteer-produced data transfer program. A worldwide network of volunteers writes and updates versions for numerous operating systems.

## USENET

The different versions of USENET news software were written by a variety of graduate students and other volunteers.

When an Internet protocol to carry USENET news was needed (UUCP over IP not being very satisfactory), a group of volunteers got together and wrote something new. The result was NNTP, the Network News Transfer Protocol, which became an Internet standard protocol.

## THE INTERNET

Important pieces of the Internet itself, which is the largest network in the Matrix, are produced by volunteers. These pieces range from software to technical management.

**KA9Q:** This is an implementation of TCP/IP for amateur shortwave radio. This IP implementation for very slow links (originally 1200bps) led to the development of the header prediction and fast start algorithms that have become mainstays of the fastest IP networks. KA9Q is also the basis for some PC implementations of TCP/IP.

**IRC:** USENET news provides asynchronous conferencing on and off the Internet, but there was no way to handle interactive distributed many-to-many conferencing on the Internet until Internet Relay Chat (IRC) was written. Again, this was done by volunteers.

**archie:** There are probably ten thousand anonymous FTP servers on the Internet, but how can you tell which one contains the program or archive you need right now? This was a perennial question until volunteers wrote archie software to poll these servers and to make this set of indexes available from a single site.

**Gopher:** For years, many people at universities had talked about producing a Campus Wide Information System (CWIS), and the University of Minnesota actually had a committee to produce one. Meanwhile, a few guys just went and did it. The result was Gopher, which provides menus of the available Internet resources worldwide.

**IETF:** When you want to organize a large distributed project on the Internet, your first choice is usually electronic mail. If you want to meet face to face or perhaps have your project become a standard for everyone else, you would turn to the Internet Engineering Task Force (IETF), whose many working groups meet three times a year. Most of the people who go to those meetings are, at least nominally, paid to attend by their companies. But many of them aren't paid to continue this work full time between meetings. The world's largest and fastest growing network has essentially volunteer tactical technical management. This remains true even in the face of unprecedented technical challenges of scale, routing, and services; massive new audiences; and the shock of commercialization and privatization. Of course, this is an oversimplification, and there are other (funded) groups involved, such as the IESG and the IAB, but there are definitely volunteer characteristics in Internet management.

## BOOKS AND DOCUMENTS

Many early books and documents about how to use the networks were largely volunteer projects. Examples include *The Matrix*, *User's Directory of Computer Networks*, *European R&D E-Mail Directory*, and *The*

*Hitchhiker's Guide to the Internet*. Books in this genre have become a minor industry in the past couple of years, but the forerunners never expected to recoup the time or even the actual money they spent on research and writing.

## BEGINNER'S LUCK

What is a volunteer, anyway? Someone who does the work for free? Many of the inventors of important network facilities did, but others had at least partial financial support for their activities. However, some of them never did receive their degrees because they spent too much time on their volunteer project, and others lost time and money along the way. A few eventually got rich, and some of them even knew what they were doing would lead to. But they all did the work because they wanted to create the tools to fill a need. The essential factor is not pristine poverty, but dedication.

Volunteers who develop and deploy new facilities need enthusiasm, and a belief that they can succeed. These are often abetted by ignorance of obstacles (which are often overrated by those who came before) and ignorance of previous attempts (except often no one else has actually tried). Sudden availability of new (to the volunteer) technology is usually the spur to action.

Difficult access to the technology, through a slow or painful interface, may provide added impetus. The volunteer often believes that a particular network or networking technology is the best there is, and all others aren't worth paying attention to. Hackers are fans of their favorite network or technology. (Here "fan" is short for "fanatic.") All this leads to enthusiasm, focus, and a belief in success, which leads to what is also known as beginner's luck.

Many network volunteers are much like hackers of the old school, as in MIT and Stanford in the '60s and '70s. They value a neat hack that works quickly and that they can fairly quickly do themselves, rather than working as part of a big project that will require months or years of planning, big funding, and big staff. Often volunteers are young, sometimes very young.

In addition, they'd rather rewrite code than document, and once they've done what they needed and moved on to the next

**BITNET LISTSERV is perhaps the most capable mailing list distribution, subscription, and archive service on any network. It was written by a high school student as a volunteer project.**



LIFETIME LABOR

PERSONALIZED SERVICE

# R-COMPUTER

PERFORMANCE · RELIABILITY · SATISFACTION · PERFECTION

QUALITY AND PERSONAL SERVICE FOREVER!

## 486-33 W/128K CACHE 130MB HARD DRIVE SVGA SYSTEM

- 486-33MHZ W/128K CACHE CPU
- 4MB RAM
- 130MB MAXTOR HARD DRIVE
- VIEWSONIC SVGA MONITOR
- SVGA CARD
- 1.2 & 1.44MB FLOPPY DRIVE

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$1498**

## 486-50 W/256K CACHE 245MB HARD DRIVE SVGA SYSTEM

- 486-50 W/256K CACHE CPU
- 4MB RAM
- 245MB MAXTOR HARD DRIVE
- VIEWSONIC SVGA MONITOR
- SVGA CARD
- 1.2 & 1.44MB FLOPPY DRIVE

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$1731**

## ULTRA-CADD 486-66 VLB 245MB HARD DRIVE SVGA SYSTEM

- 486 W/256K CACHE
- 8MB RAM
- 245MB QUANTUM HARD DRIVE
- NEW VIEWSONIC 17 SVGA ULTRA HIGH 1600X1024 RESOLUTION MONITOR WITH 76HZ REFRESH RATE
- ORCHID P9000 WEITEK CO-PROC. VLB VIDEO CARD W/3MB
- 1.2 & 1.44MB FLOPPY DRIVE

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$3195**

## R-COMPUTER PAPERLESS OFFICE SYSTEM

- 486-33MHZ W/256K CACHE CPU
- 4MB RAM
- 340MB HARD DRIVE
- VIEWSONIC SVGA MONITOR
- SVGA CARD
- 1.2 & 1.44MB FLOPPY DRIVE
- HEWLETT PACKARD II SCANJET SCANNER
- PAGEKEEPER DATABASE OCR PAPERLESS OFFICE SOFTWARE

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$2959**



## VIEWSONIC MONITORS

|              |       |
|--------------|-------|
| VIEWSONIC 2  | \$250 |
| VIEWSONIC 4  | 285   |
| VIEWSONIC 6  | 315   |
| VIEWSONIC 5E | 395   |
| VIEWSONIC V7 | 949   |
| MAG17F       | 1040  |
| VIEWSONIC V8 | 1580  |
| VIEWSONIC 15 | 565   |
| 17           | 1099  |
| 20           | 1840  |

## 486-25 130MB HARD DRIVE SVGA SYSTEM

- 486-25MHZ CPU
- 4MB RAM
- 130MB MAXTOR HARD DRIVE
- VIEWSONIC SVGA MONITOR
- SVGA CARD
- 1.2 OR 1.44MB FLOPPY DRIVE

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$1272**

## COMPLETE 486 MULTI-MEDIA SYSTEM

- 486-33MHZ W/256K CACHE CPU
- 4MB RAM
- 130MB MAXTOR HARD DRIVE
- VIEWSONIC SVGA MONITOR
- SVGA CARD
- 1.2 & 1.44MB FLOPPY DRIVE
- MEDIA VISION
- PRO AUDIO SPECTRUM - 16 BIT
- TEXCEL CD ROM (300KB SEC/265 MS)
- WINDOWS 3.1

COMPLETE SYSTEM WITH  
DELUXE CASE AND KEYBOARD

**\$2109**

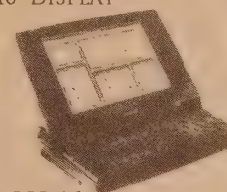
## BCC NOTEBOOKS AVANTI 486 SLC

- 486SLC/25 MHZ PROCESSOR
- 130MB HARD DRIVE
- DOS
- HIGH CONTRAST 10" DISPLAY

**\$1549**

Color Model

**\$2295**



## VIDEO GRAPHICS

|                           |      |
|---------------------------|------|
| TRIDENT 9000              | \$39 |
| TRIDENT 8900              | 59   |
| GENOA 24BIT               | 89   |
| DIAMOND SPEEDSTAR PRO VLB | 129  |
| DIAMOND SPEEDSTAR 24      | 149  |
| ORCHID PRO IIS            | 140  |
| DIAMOND STEALTH           | 179  |
| FAHRENHEIT 1280           | 179  |
| ORCHID P9000              | 345  |
| DIAMOND VIPER             | 395  |

PERSONALIZE SERVICE  
WITH CUSTOM  
CONFIGURATION

LANtastic Authorized Dealer

|                                     |                   |
|-------------------------------------|-------------------|
| Commod Ave                          | 680               |
|                                     | Sun Valley        |
|                                     | Contra Costa Blvd |
| <input checked="" type="checkbox"/> | Golf Club         |

PRICES SUBJECT TO CHANGE W/O NOTICE.



LIFETIME LABOR WARRANTY PERSONALIZED SERVICE

# R-COMPUTER

SERVING YOU FOR 8 YEARS

**(510) 798-4884**

30 GOLF CLUB ROAD, PLEASANT HILL, CA 94523

THE INTEL INSIDE LOGO IS A REGISTERED TRADEMARK OF INTEL CORPORATION

LANtastic by ARTISOFT

LAN TIMES  
READERS  
CHOICE  
1992

LAN MAGAZINE  
1992 PRODUCT  
OF THE YEAR

PC  
MAGAZINE  
EDITORS'  
CHOICE



project they usually don't stop to record what they did. They don't especially care what others think, except for other hackers and sometimes their users. They want to get things done, and have fun doing it.

## **FUN AND FUNDING**

There is no fun without funding. Volunteers have to do something to eat. Often, they work for universities or large corporations who are paying them to do something else. Usually they hack long hours after they do whatever brings in money. Sometimes they just live very frugally. They have been known to squeeze in volunteer projects during slack hours at their regular job, or to redefine their job descriptions in creative ways.

Lack of funding also leads to gratuitous variation. If there's no funding for software, other hackers will get whatever free version is available and just hack it to do new tricks. Everybody hacking it here and tweaking it there leads to a jillion variations and different degrees of compatibility.

The relative paucity of documents explaining how networks work, and the even greater lack of documents explaining how they can be used, is another strong indication of the amount of volunteerism and the lack of funding. This problem is even more noticeable when we remember that most of the early comprehensive network user documents were the result of volunteer projects.

Take a moment and look how quickly the wave of new Internet user books started appearing once someone demonstrated that the Internet had grown large enough

ignores UUCP; archie only does UNIX anonymous FTP, not TOPS-20 or VMS; LISTSERV still only really runs on BITNET; etc. Paradoxically, the N.I.H. (Not Invented Here) syndrome is a spur to inventiveness even as it is a curse to users.

Network users in general don't really care which network they are using: they just want services, and they don't want to look under the hood. But who really represents the users?

Lack of awareness of prior art (when there is any) or other disciplines or technologies can lead to needless divergence of protocols and implementations. For instance, today, there seems to be a lot of people in the BBS world busily reinventing various aspects of network protocols that have long been in use on distributed networks. Some of them are also discovering UUCP as a nifty new (to them) thing. New Internet users often think FTP is an astonishing futuristic tool, and it probably is to a user who has only known isolated PCs or uploading to and downloading from a conferencing system or BBS.

Even people with experience and the best intentions may miss some of the more subtle aspects of prior art. For example, it is not enough just to use the USENET message format (RFC1036) to transmit messages between conferences on PARTI, Caucus, or other single-machine conferencing systems. USENET news lacks certain features of such conferences, most notably support for explicit threads of conversation. RFC1036 needs to be extended to account for this. It is not enough for each implementor of a translation interface between RFC1036 to implement an

were producing reams of answers to the wrong questions, others, many of them volunteers, have simply gone ahead and specified and implemented something (RFC 822 mail and the DNS Domain Name System) that worked.

## **FREE VS. COMMERCIAL**

If a volunteer project is the first usable one, it may quickly become a de facto standard if it provides a needed service. Once there is a large installed base for the original free version, others are not likely to invest the time developing a better design or implementation. If it works, more or less, and it is free, more or less, why spend money building something new?

This can turn into a serious problem for commercialization of an area pioneered by a free facility. A rule of thumb is that a staff-year to make the equivalent of a free program is probably not too expensive for a commercial product to compete.

This is especially true in an environment like USENET or the Internet where commercial concerns are not a very high priority, and may even be viewed with hostility. In this way, these environments ensure that many of the facilities will remain free. This might seem good to the end-user (free software! free services!) but leads to a paucity of the kinds of labor-intensive services that could be supplied if they could be charged for. Look at what's available on CompuServe (airline reservations, stock quotes, etc.) that's not available on the Internet. Some of it now is, but almost solely through services such as ClariNet or WAIS that have permission, often "experi-

**Once there is a large installed base for the original free version, others are not likely to invest the time developing a better design or implementation. If it works, more or less, and it is free, more or less, why spend money building something new?**

for a sizeable market of buyers to exist. Soon we may see interesting protocol implementations being supported from sales to network users in the same manner that games and other applications sell to PC users now.

## **20-20 NEARSIGHT AND SQUARE WHEELS**

The close focus on a single network that makes the volunteer's efforts possible often introduces problems that have to be corrected later. Netfind is Internet-only and

encoding of threads into the existing RFC1036 facilities, because each will do it differently, and the classic "N x N" problem of multiple implementations producing other needless implementations.

Once several almost round wheels have been invented, it's unfortunate that square ones keep being reinvented. One may also wonder why the X.400 specifications have never been extended to handle conferencing, instead of just point-to-point messaging. Of course, this question is now moot, since while properly constituted international standards committees

mental," to provide services for pay.

The converse is also true. Once there are commercial products in an area, there's usually no point in producing free versions, unless the commercial products are seriously broken. Spend your volunteer time in more productive areas instead.

## **BURNING THE CANDLE**

Volunteers only last so long. People almost never recognize that volunteers are volunteers. It's always "Fix it, right now!" If the volunteer says "Well, I'm busy right now; I

*continued on page 275*



# We Have What You Want!

**Cypress 820 Notebook gives 32-Bit VESA Local Bus Power and the expandability of a desktop computer!**

Type III PCMCIA slot (for credit card size accessories, fax/modem, hard drive, memory or LAN adapter)

Ports for 2 Serial, 1 Parallel, Keyboard and SVGA Display

Built-In 16-Bit Future Domain SCSI Controller (>10MB/ms)

Big screen monitor stand

4 expansion slots: 2-32 Bit VESA Local Bus, 2-16 Bit ISA with space for 3 full length cards and 1-3/4" sized card.

25-Pin external SCSI port

Internal 3-1/2" drive bay for SCSI hard drive of up to 2GB

Drive bay for SCSI CD-ROM or tape back-up

**Cypress Super Docking Station**

Built-in stereo speakers

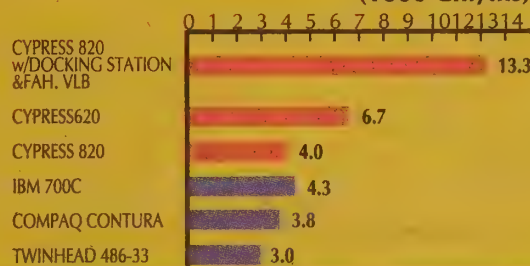
**2**  
Year Limited & 1  
Year Parts On  
All Notebooks

**Cypress 820 Notebook**

- 10" Active Color Matrix or 64 gray scale Mono
- 32-Bit VESA Local Bus Video
- 32-Bit VESA Local Bus IDE Controller
- 128K Secondary Cache (optional)
- PCMCIA slots (type III)
- 4MB RAM, expandable to 8 or 20MB
- 1.44MB floppy drive
- 120MB hard drive (200MB or 252MB optional)
- Built-in trackball
- Carrying case, battery adapter
- 11" x 8.6" x 1.9", 6.6lbs

**Video Performance Test (Landmark V.1.0)**

(1000 Chr/ms)



| Model/CPU             | 820M Mono | 820S Dual Scan Color | 820T Active Color |
|-----------------------|-----------|----------------------|-------------------|
| 486DX-33              | \$2080    | \$2700               | \$3630            |
| 486DX2-66             | \$2290    | \$2980               | \$3930            |
| Super Docking Station | \$510     |                      |                   |

**Cypress 650 Notebooks**

- Local Bus VGA Display & Local Bus IDE
- 4MB (expandable to 8 or 20MB)
- 120MB hard drive (200 or 240MB optional)
- 1.44MB floppy drive
- 10" LCD display
- Built-in trackball
- PCMCIA slots (type II)
- Ports for 1S, 1P, Keyboard & SVGA monitor
- Carrying bag & adapter
- 11" x 8.6" x 1.7", 6.5lbs

**Upgradable screen & upgradable speed!**



| Model / CPU | 650M Mono | 650P Passive Color | 650T Active Color |
|-------------|-----------|--------------------|-------------------|
| 486DX-33    | \$2070    | \$2650             | \$3550            |
| 486DX2-66   | \$2150    | \$2730             | \$3630            |

**Notebook Accessories**

Universal Docking Station for all notebooks, any brand, any speed

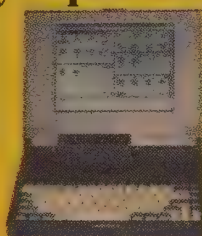
- Connects to the parallel port
- allows notebooks to expand by adding up to 4 SCSI devices including CD-ROM, hard drive, tape back up or Bernoulli.....\$299

PCMCIA PC Cards (Fax/Modem, LAN, memory) ....CALL  
Notebook hard drives (120MB, 200MB, 252MB) ...CALL

**Cypress 200M Mono Notebook**  
486SX-25 Intel CPU (Upgradable)

- 10" 64 gray scale display
- 4MB RAM (expandable to 8 or 20MB)
- 1.44MB floppy w/120MB hard drive
- Trackball, carrying case & adapter
- 8.9" x 11.4" x 1.7"; 5.5lbs

**Most affordable yet powerful!**



**Only \$1500**



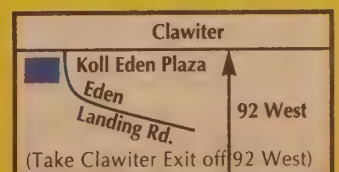
**CYPRESS COMPUTER**

**HEADQUARTERS:**

26120 Eden Landing Road, Suite 6,  
Koll Eden Plaza, Hayward, CA 94545  
Tel: 510-786-9106 ♦ Fax: 510-786-9553  
**1-800-728-6688**  
Hours: Monday-Friday 9:00-6:00  
Saturday by appt.

**BRANCH OFFICE:**

3472 El Camino Real, Santa Clara, Ca. 95051  
Tel: 408-261-0628 ♦ Fax: 408-261-0639  
**1-800-675-5465**  
Hours: Monday-Friday 9:30-6:00  
Saturday 10-5





# We Have Done Our Homework For The Latest Te

UMiracle UMiracle UMiracle UMiracle UMiracle UMiracle UMiracle UMiracle U

Wanna bet on the latest VLB technology? Who can guarantee that the system you want can actually be built and work well? At UMiracle we keep searching around and find all the possible solutions for you - Which harddrive will work the best on VLB? Which video card has the best value on the VL Bus? Which will support 50MHz? What video chipset should you use? Will it be safe to be on 50MHz VLB? What is Bus-Mastering? Do you need that? How about P5 Overdrive upgradeable? At UMiracle, We make them all work and work the best. Come to us, we have done the homework so you don't have to!

## ISA VESA Local Power Station

- 486 ISA VESA LocalBus 256K Cache Motherboard
- 4MB 70ns SIMM RAM (1M-70ns SIMMx4)
- 1.2M & 1.44M TEAC Floppy Drives
- 213MB Western Digital Harddisk 64K Cache
- Promise DC2000 VLB 32Bit IDE Controller with I/O
- SPIDER VLB 1MB Windows Accelerator **486-33SX \$1192**
- 14" 1024X768 0.28DP Impression Monitor **486-33DX \$1314**
- Premium Mini Tower 230W PS **486-40DXAMD \$1334**
- 101 Enhanced Keyboard **486-50DX/2 \$1367**
- 486-66DX/2 \$1502**

Don't just blindly look for the lowest prices! Regular ISA system is bottle-necking with its 8MHz AT bus. Even with a fast CPU, it's like a three hundred horse-powered YUGO, harddisk and video performances are limiting the overall performance. Think smart and get a well-balanced VESA LocalBus system for now, and for your future. Spend a little bit more, break the 8MHz AT Bus bottleneck and run the video and harddisk at the same speed that CPU is running! With this fully-tested VLB motherboard, we can guarantee that you won't run into any incompatibility problem! And with our Promise 32Bit VLB IDE controller and 32Bit VLB video accelerator, harddisk transfer performance TRIPLES! Video runs at least (not up to!) TEN TIMES faster in both DOS and Windows than Regular ISA computer. Come on in and get a test-drive on this amazing machine! You have to see it to

Recommended Upgrades:  
Orchid Fahrenheit VLB STD/VA/Celsius add\$40/100/120  
Diamond SpeedstarPro/Stealth 24/Pro/Viper add\$15/60/170/270  
Promise 1/4/16MB Cache VLB 4030VL add\$160/284/752  
Western Digital HD 250/340/420MB add\$25/85/205  
Ultrastor 34F/BusLogics BT445S/AIR + SCSI HD add\$Call  
Premium DeskTop/Med/Full Tower add\$5/25/45  
KFC 14"/15"/17" Multisync Monitor add\$105/195/530  
Sony/NEC/Viewsonic/Nanao/Mag add\$Call  
Mouse/DOS V6.0/Windows V3.1 add\$Call/49/59

You can expect to come by and pick one up! We have them pre-built!

## Multimedia CD Titles

| No. | Description                      | Price | No. | Description                   | Price | No. | Description                   | Price |
|-----|----------------------------------|-------|-----|-------------------------------|-------|-----|-------------------------------|-------|
| 001 | MICROSOFT CINEMANIA              | \$65  | 066 | CROSSWORD CRACKER             | \$23  | 130 | SHAREWARE BONAZA              | \$43  |
| 002 | WING COMMANDER & ULTIMA VI       | \$35  | 067 | DESERT STORM                  | \$23  | 131 | SHAREWARE GOLD VOL.2.0        | \$43  |
| 003 | SO MUCH SHAREWARE II             | \$25  | 068 | DINOSAUR ADVENTURE            | \$24  | 132 | SHAREWARE/B                   | \$45  |
| 004 | MICROSOFT BOOKSHELF              | \$27  | 069 | EDUCATION MASTER              | \$23  | 133 | SHAREWARE/CMP                 | \$46  |
| 005 | SLEEPING BEAUTY                  | \$37  | 070 | ELECTRONIC LIB OF ART VI      | \$27  | 134 | SHAREWARE/ILT                 | \$39  |
| 006 | COMPTON'S ENCYCLOPEDIA (MPC)     | \$49  | 071 | ENCARTA BY MICROSOFT-DISTI    | \$25  | 135 | SHAREWARE/W                   | \$39  |
| 007 | THE 7TH GUEST-BY VIRGIN          | \$33  | 072 | COREL DRAW V4.0               | \$35  | 136 | SHERLOCK HOLMES VOL.2.0       | \$57  |
| 008 | DICTIONARY OF LIVING WORLD       | \$29  | 073 | EUROPEAN RACER BY REVELL      | \$55  | 137 | SHERLOCK/CONSULT DET          | \$21  |
| 009 | ARTHUR'S TEACHER TROUBLE         | \$23  | 074 | FAMILY CHOICE                 | \$25  | 138 | SIMTELMSDOS SHAREWARE         | \$17  |
| 010 | BARNEY BEAR GOES TO SPACE        | \$19  | 075 | FAMILY DOCTOR                 | \$25  | 139 | SO MUCH SCREENWARE            | \$37  |
| 011 | BEAUTY & BEAST                   | \$18  | 076 | FAMILY DOCTOR MPC             | \$27  | 140 | SPACE ADVENTURE               | \$23  |
| 012 | MACMILLAN DICTIONARY             | \$39  | 077 | FAMILY EDUCATION COLLECTION   | \$24  | 141 | SPACE SERIES APOLLO           | \$35  |
| 013 | MIXED UP MOTHER GOOSE            | \$18  | 078 | FONT MASTER I                 | \$19  | 142 | SPEEDWAY                      | \$33  |
| 014 | CARMEN SAN DIEGO-DELUXE          | \$21  | 079 | FONT MASTER 11                | \$23  | 143 | STORY TIME                    | \$23  |
| 015 | JONE IN THE LANE                 | \$18  | 080 | FUTURA GAMES                  | \$18  | 144 | STW GROUPE'S ENCY MPC         | \$45  |
| 016 | PLAYING W/ LANGUAGES-ENGLISH     | \$27  | 081 | GAME MASTER                   | \$19  | 145 | SWIMWEAR 1993                 | \$29  |
| 017 | SHAREWARE/ANK                    | \$45  | 082 | GAMEPAK I                     | \$23  | 146 | TEMPRA KODAK ACCESS SW        | \$18  |
| 018 | MARIO'S MISSING WORLD ATLAS      | \$21  | 083 | GAMEPAK II                    | \$33  | 147 | TERRORIST GROUP PROFILES      | \$31  |
| 019 | MAYO CLINIC FAMILY HEALTH BK     | \$22  | 084 | GIFSGALORE                    | \$17  | 148 | TIMEALMANAC 1991              | \$24  |
| 020 | NATIONAL GEOGRAPHIC MAMMALS      | \$22  | 085 | GREAT CITIES VOL. 1.0         | \$21  | 149 | TIME TABLE OF HISTORY-SCIENCE | \$21  |
| 021 | REFERENCE LIBRARY BY STW         | \$28  | 086 | GREAT CITIES VOL. 2.0         | \$21  | 150 | TOTAL BASEBALL                | \$20  |
| 022 | CHESS MASTER 3000 MPC            | \$18  | 087 | GUINNESS DISC MPC 1993        | \$23  | 151 | TRUE TYPE EXPLOSION FONTS     | \$22  |
| 023 | KINGS QUEST V                    | \$14  | 088 | HOT STUFF 2.0                 | \$25  | 152 | U.S. ATLAS                    | \$16  |
| 024 | SPACE QUEST IV                   | \$22  | 089 | INDIANA JONES FATE ATLANIS    | \$33  | 153 | U.S. ATLAS/W/AUTOMAP          | \$22  |
| 025 | STELLAR SEVEN                    | \$19  | 090 | KGB WORLD FACT BOOK           | \$33  | 154 | U.S. HISTORY                  | \$18  |
| 026 | ALL BEAUTIES                     | \$28  | 091 | KILLER TRACK CD-MUSIC LIB     | \$17  | 155 | U.S. WORD ATLAS PACK          | \$20  |
| 027 | ADULT REFERENCE LIBRARY          | \$29  | 092 | KODAK PHOTO ACCESS            | \$23  | 156 | U.S.A. STATE FACT BOOK        | \$33  |
| 028 | GIRLS OF VIVID VOL. 1.0          | \$48  | 093 | LET'S PLAY                    | \$18  | 157 | VARIETY STORE                 | \$16  |
| 029 | GIRLS OF VIVID VOL. 2.0          | \$48  | 094 | LIBRARY OF THE FUTURE 1ST     | \$43  | 158 | VGA SPECTRUM SOUND LIBRARY    | \$18  |
| 030 | ASIAN LADIES                     | \$46  | 095 | LOOM                          | \$19  | 159 | WIZ-PAK SHAREWARE             | \$15  |
| 031 | ABOUT COWS                       | \$29  | 096 | LOVELY LADIES                 | \$33  | 160 | WOMAN IN MONITOR              | \$57  |
| 032 | ADVENTURE OF WILLY BEAMISH       | \$19  | 097 | MAGAZINE RACK                 | \$29  | 161 | WORLD ATLAS MPC               | \$16  |
| 033 | AIRCRAFT ENCYCLOPEDIA            | \$33  | 098 | MANHOLE                       | \$34  | 162 | WORLD OF FLIGHT               | \$29  |
| 034 | AMERICAN BUSINESS PHONEBOOK 1992 | \$21  | 099 | MANTIS EXPERIMENTAL FIGHTER   | \$22  | 163 | WORLD OF TRAINS               | \$29  |
| 035 | AMERICAN VISTA                   | \$31  | 100 | MAVIS BEACON TYPING 2.0 MPC   | \$21  | 164 | WORLD VISTA                   | \$29  |
| 036 | ANIMALS ENCYCLOPEDIA MPC         | \$33  | 101 | MEDIA CLIPS-4PAK              | \$39  | 165 | ANIMATED FANTASIES VOL.1.0    | \$37  |
| 037 | ARCADE BATTLES                   | \$21  | 102 | MIRROR MIRROR                 | \$19  | 166 | ANIMATED FANTASIES VOL.2.0    | \$37  |
| 038 | ARIS JETS & PROPS 2 DISKS        | \$25  | 103 | MONKEY ISLAND-ENGLISH         | \$19  | 167 | GIRLS OF VIVID BEST           | \$48  |
| 039 | ARIS WILD PLACES                 | \$21  | 104 | MUSICAL INSTRUMENTS           | \$64  | 168 | HOTPIX ECSTASY                | \$37  |
| 040 | ARIS WIZARD TEST AND TUNEUP      | \$21  | 105 | NATIONAL PARKS                | \$27  | 169 | HOTPIX VOL.2.0                | \$37  |
| 041 | ARIS WORLD VIEW                  | \$21  | 106 | NITEOWL 9 SHAREWARE           | \$33  | 170 | HOTPIX VOL.3.0                | \$37  |
| 042 | AUDUBON BIRDS                    | \$23  | 107 | NORTH AMERICAN FAX BOOK       | \$34  | 171 | HOTPIX VOL.5.0                | \$37  |
| 043 | AUDUBON MAMMALS                  | \$23  | 108 | OCEAN DIGITAL IMAGERY VOL.1.0 | \$29  | 172 | HOUSE OF SLEEPING BEAUTY      | \$49  |
| 044 | BARNEY BEAR GOES TO SCHOOL       | \$21  | 109 | OLDIES BUT GOODIES            | \$18  | 173 | PHYSICAL THERAPY              | \$35  |
| 045 | BARRON'S COLLEGE GUIDE           | \$25  | 110 | OS/2 ARCHIVES                 | \$19  | 174 | POKWARE VOL.2.0               | \$39  |
| 046 | BATTLE CHESS                     | \$21  | 111 | OUR SOLAR SYSTEM              | \$17  | 175 | STORM VOL.1.0                 | \$35  |
| 047 | BEETHOVEN BY MICROSOFT-DISTI     | \$69  | 112 | PACIFIC ISLAND                | \$39  | 176 | STORM VOL.2.0                 | \$35  |
| 048 | BRAIN DRAIN                      | \$21  | 113 | PC MEDIC                      | \$29  | 177 | STORM VOL.3.0                 | \$35  |
| 049 | BUS & ECON. WORLD ATLAS          | \$26  | 114 | PC SIG 11 SHAREWARE           | \$18  | 178 | SOUTHERN BEAUTIES             | \$48  |
| 050 | BUSINESS BACKGROUND              | \$44  | 115 | PC SIG 12 SHAREWARE           | \$23  | 179 | WOMEN OF VENUS                | \$30  |
| 051 | BUSINESS MASTER                  | \$23  | 116 | PETER AND THE WOLF            | \$19  | 180 | 101 SEX POSITION VOL.1        | \$49  |
| 052 | CALIFORNIA COLLECTION            | \$21  | 117 | PHOENIX 3.0 SHAREWARE         | \$18  | 181 | 101 SEX POSITION VOL.2        | \$49  |
| 053 | CAREER OPPORTUNITIES             | \$29  | 118 | PLAYING W/ LANGUAGES-FRENCH   | \$27  | 182 | CLIP MASTER PRO               | \$35  |
| 054 | CHESS MANIA                      | \$43  | 119 | PLAYING W/ LANGUAGES-GERMAN   | \$27  | 183 | ECOQUEST                      | \$26  |
| 055 | CICA WINDOWS                     | \$18  | 120 | PLAYING W/ LANGUAGES-JAPANESE | \$27  | 184 | BUSTY OF BABES                | \$30  |
| 056 | CINEMANIA BY MICROSOFT-DISTI     | \$69  | 121 | PLAYING W/ LANGUAGES-SPANISH  | \$27  | 185 | HOTPIX VOL.3                  | \$37  |
| 057 | CLIP ART HEAVEN                  | \$25  | 122 | PROPHONE 1993                 | \$129 | 186 | HOTPIX VOL.4                  | \$37  |
| 058 | CLIP ART GOLIATH                 | \$19  | 123 | PROGRAMMER'S ROM              | \$33  | 187 | PACIFIC RIM VID               | \$54  |
| 059 | COLOSSAL COOKBOOK                | \$18  | 124 | PUBLISH IT 2.0                | \$18  | 188 | AFTER DARK TRILOGY            | \$54  |
| 060 | COMPLETE BOOKSHOP                | \$18  | 125 | ROGER REBERT'S MOVIES COMPAN  | \$32  | 189 | LEGEND OF KAMASUTA            | \$55  |
| 061 | COMPOSER QUEST                   | \$33  | 126 | SANDIEGO ZOO/ANIMALS          | \$22  | 190 | WICKED WINDOWS                | \$55  |
| 062 | CONSUMER INFORMATION             | \$33  | 127 | SECRET WEAPON OF UFT WAFFE    | \$22  | 191 | DIGITAL DREAMS                | \$44  |
| 063 | COREL ARTSHOW 3                  | \$53  | 128 | SFX 300 SOUND EFFECTS         | \$15  | 192 | BUSTING OUT BY VIVID          | \$54  |
| 064 | CREATIVE PRO SOUND               | \$23  | 129 | SHAKEPEARE                    | \$22  |     |                               |       |

## AIR ISA VESA Local Power Station

- 486 AIR ISA 3 Slot VESA LocalBus 256K Cache Motherboard
- 4MB 70ns SIMM RAM (1M-70ns SIMMx4)
- 1.2M TEAC & 2.88M TOSHIBA Floppy Drives
- 250MB IDE Western Digital 64K Cache Harddisk
- VLB 32Bit IDE Controller with 2 Hi-Speed I/O and 2.88MB Support
- SPIDER VLB 1MB Windows Accelerator **486-33SX \$1353**
- 14" 1024X768 0.28DP Impression Monitor **486-33DX \$1475**
- Premium Mini Tower 230W PS **486-40DXAMD \$1495**
- 101 KeyTronic Keyboard **486-50DX/2 \$1528**
- 486-50DX \$1607**
- 486-66DX/2 \$1663**

We just keep improving! 2.88MB floppy drive used to be highly-priced and floppy controller chipset for 2.88MB was expensive! Not until now! For only 10 bucks more and you can get ready for the future! And remember, 2.88MB is downward compatible with 1.44M and 720K, so you will have no problem reading or writing. Plus our high-speed UART 16550 buffer chips for COM1 and COM2 - a must for true Windows Multi-tasking, background serial port/modem smooth data transmission, you just won't lose buying from us. And with our name brand AIR motherboard, you get 3 VLB slots, all with Bus mastering capability, 50MHz VLB compatibility, Intel P5 Overdrive support and GUARANTEED future compatibility, you are definitely buying into future with this motherboard! No one can offer you this perfect machine at this perfect price, we guarantee it!

Recommended Upgrades:  
Orchid Fahrenheit VLB STD/VA/Celsius add\$40/100/120  
Diamond SpeedStarPro/Stealth 24/Pro/Viper add\$15/60/170/270  
Promise 1/4/16MB Cache VLB 4030VL add\$148/272/740  
Western Digital HD 213/340/420MB add\$25/60/120  
UltraStor 34F/BusLogic BT445S/AIR + SCSI HD add\$Call  
Premium DeskTop/Med/Full Tower add\$5/25/45  
KFC 14"/15"/17" Multisync Digital Monitor add\$105/195/530  
Sony/NEC/Viewsonic/Nanao/Mag add\$Call  
Mouse/DOS V6.0/Windows V3.1 add\$Call/49/59

Guaranteed the lowest price you can find anywhere on the market!

## AIR EISA VESA Local Power Station

- 486 AIR EISA 3 Slot VESA LocalBus 256K Cache Motherboard
- 16MB 70ns RAM 72 Pin SIMM
- 1.2M & 1.44M TEAC Floppy Drives
- 345MB Maxtor SCSI 14MS Harddisk 64K Cache
- BusLogic BT445S VLB SCSI-2 Bus-Mastering Controller
- Diamond Viper VLB 2MB VRAM Windows Accelerator
- Impression 17" 1280X1024NI - Exactly MAG 17F like!
- AT I/O 2S/1P/1G **486-33SX \$3273**
- Premium Full Tower 250W PS **486-33DX \$3395**
- 101 KeyTronic Keyboard **486-40DXAMD \$3415**
- 486-50DX/2 \$3448**
- 486-66DX/2 \$3583**

The highest-end you can find! AIR EISA VESA LocalBus Motherboard supports P5 Overdrive, ZIF Socket for easy upgrade & 256MB Memory on board. Yes! 256MB using 72Pin 64MB SIMM! (Soon to be released) Great news for Imaging and Photographic software users! And with full 8 EISA slots and 3 VESA LocalBus extensions, you can plug in any different bus cards you want! We bundle this machine with a Bus-Mastering SCSI-2 VLB Controller and rockets the Data Transfer Rate to close to 10MB/Sec! This amazing controller supports 7 hard drives and transfers up to 66MB/Sec. Besides we add the ultimate Windows Accelerator Diamond Viper and make the Windows fly at the highest possible WinMarks. Believe it, you won't find a machine performs closer to this at any price!

Recommended Upgrades:  
Promise Cache VLB 4030VL+IDE HardDisk add\$Call  
SCSI-2 HardDisk add\$Call  
Sony/NEC/Viewsonic/Nanao/Mag add\$Call  
Mouse/DOS V6.0/Windows V3.1 add\$Call/49/59

See this machine with Windows NT 3.1 running in our showroom!

Phone: 510-226-6746  
Fax: 510-226-6758

Mon to Sat 9:00AM-6:00PM PST

Reminder: It makes no sense to buy an VLB system without Harddisk Controller and Video card on VLB. You aren't taking the advantage of the VLB! Be careful!

- ✓ Free Local Area Delivery for system Purchase
- ✓ 1 Year Parts and Life Time Labor Warranty
- ✓ Expertise LifeTime Technical Support
- ✓ 30 Day Money Back Compatibility Guarantee





# Technology. VESA Local Bus, You Can Count On Us!

Orchid Super VESA LocalBus Station

- Orchid SuperBoard 486 VLB 2 Slot 256K Cache Motherboard
- 486 70ns SIMM RAM (1M-70ns SIMMx4)
- 1.2M & 1.44M TEAC Floppy Drives
- 213MB Western Digital Harddisk 64K Cache
- Orchid VESA LocalBus 32Bit IDE Controller with 2S/1P/1G
- Orchid Fahrenheit VLB 1MB w/ S3-805 Chipset 24M Winmarks
- 14" 1024X768 0.28DP Impression Monitor
- Premium Mini Tower 230W PS
- 101 Enhanced Keyboard

Orchid's Second Generation Superboard 486 VLB, the minibaby AT-sized motherboard built with an unrivalled feature set. This unique motherboard rounds out Orchid's family of VLB products to provide complete VLB solution. With Orchid's new VLB IDE I/O card and Orchid Fahrenheit VLB, you simply won't find anything that's faster and more reliable. A complete VESA LocalBus solution from Orchid! Fahrenheit VLB VA with Voice Annotation capability lets you speak to your computer rather than type. All new optional upgrade Celsius VLB uses the IIT AGX015 graphics processor and high performance VRAM and cranks out 38.8 Wintach V1.2 overall RPM test, compared to 20.34 on ATI VLB Mach 32. Come by and try the difference!

Fastest Video Performance at this price range!

## Components/Upgrades

- 386/486 ISA 128K - 386/486 CPU support.....\$100
- 486 ISA VLB 256K - P24T support.....\$120
- 486 AIR ISA VLB 256K - 3 VLB slots, upto 50MHz
- ZIF, P24T support, bus-master.....\$185
- Memory Expansion Card 32MB for AIR ISA VLB.....\$95
- 486 AIR Full EISA VLB - 3 VLB Slots, upto 50MHz
- upto 256MB by 72Pin SIMM, ZIF, P24T support
- 8 EISA slots + 3 VLB (256/512K).....\$380/460
- 486 Orchid VLB SuperBoard 256K
- 2 VLB slots, bus-master.....\$160
- 486 Diamond FastBus VLB 256K Cache - uses 72Pin SIMM
- Onbrd IDE I/O, 2 VLB slots, ZIF, bus-master..\$250
- 2 & Memory (Price is Call Subject to Change Daily)
- Pentium P5/P24T Overdrive CPU.....\$Call
- Intel 486 25SX/33SX/33DX/50DX2/50DX/66DX2.....\$Call
- AMD 486-40DX (Pin to Pin Compatible with Intel).....\$Call
- 1MB DRAM (44256-70ns DRAMx8).....\$40
- 1MB VRAM (44256-70ns VRAMx8).....\$60
- 1MB RAM (256K-70ns SIMMx4).....\$48
- 1MB RAM (1M-70ns SIMMx4).....\$172
- 16MB RAM (4M-70ns SIMMx4).....\$640
- 72Pin 70ns SIMM (4/8/16/32MB).....\$190/370/660/1420
- Card Controller Card Network Card
- Impression Dual Printer Card.....\$12/18
- ATI/O 2S/1P/1G.....\$12
- ATI/O 2S/1P/1G w/ 2 HiSpd UART 16550's.....\$45
- 16Bit IDE 2FD/2HD Controller.....\$12
- 16Bit IDE 2FD/2HD with 2S/1P/1G.....\$14
- 16Bit IDE 4FD/2HD 2.88MB support.....\$39
- 16Bit IDE 4FD/2HD 2S/1P 2.88MB support.....\$49
- QuickPath Port-Folio 16550 13-Port I/O Card.....\$125
- DE Caching Controller Upd to 64MB, 2HD/4FD.....\$105
- Promise DC-2000 VLB IDE w/ I/O.....\$35
- VLB IDE 2FD/2HD w/ I/O Support 2.88MB,
- with 2 HiSpd UART 16550's, 1 Parallel.....\$80
- Orchid VLB IDE Controller w/ I/O.....\$60
- DTC 2270VL VLB IDE w/ I/O.....\$75
- Promise DC-4030VL VLB IDE w/ 0MB Cache.....\$135
- UltraStor 34F SCSI-2 VLB Bus-Mastering.....\$265
- UltraStor Software Driver Kit for 34F.....\$45
- BusLogic BT445S VLB SCSI-2, Bus-Mastering
- w/ Floppy Ctrl & Driver Kit.....\$265
- Adaptec 1522B/1522BK SCSI Controller.....\$95/140
- Adaptec 1542C/1542CK SCSI Controller.....\$195/225
- Adaptec NEW 2742 EISA SCSI-2 Controller
- w/ Dual Channel supporting 14 SCSI devices.....\$385
- Adaptec NEW AES-6360VL SCSI-2 VLB Controller.....\$230
- w/ Floppy Ctrl & Driver Kit
- AIR NEW QAccess Fast SCSI-2 VLB Controller
- Bus-Mastering w VLB IDE/FD and 2S/1P/1G.....\$205
- AIR VLB 32Bit Ethernet Adaptor.....\$190
- Ethernet NE2000 16Bit Adaptor Coaxial/10 Base-T.....\$55

- Prices, Specifications and Availability Subject to Change without Notice
- Prices reflect Cash Prices, Credit Card Purchases Subject to Surcharge
- Non-Local-Area Sales are Subject to Shipping and Handling Charges
- All Returns, except compatibility problem, are Subject to a 15% Re-stocking Charge
- All Mail-in Returns Require a RMA Number & Must be in Original Condition Prepaid
- Optional 2nd Year Extended Parts Warranty for 5% of system price, call for detail!

We have demo machines running NT, OS/2 V2.1

in our showroom, come and try anytime!

International Order Welcome!

We ship to you daily!

## Diamond FastBus VLB Power Station

- 486 Diamond FastBus VLB 256K Cache Motherboard w/ IDE I/O
- 8MB 70ns RAM 72 Pin SIMM
- 1.2M & 1.44M TEAC Floppy Drives
- 340MB IDE Western Digital 64K Cache Harddisk
- Diamond Stealth 24 VLB 1MB Windows Accelerator
- OKFC 15" 1280x1024NI Multisync, Digital Controlled, Flat Screen
- Premium Medium Tower 230W PS
- 101 KeyTronic Keyboard

Accept only the finest! We don't vaguely write down what you will get, we just specifically state here what will be on the system. Unlike buying from our competitors, you know what you will get when you are reading this. No gimmicks, No tricks! Value-added engineering closely couples Diamond FastBus VLB motherboard and Stealth 24 accelerator to ensure speed and performance in DOS, Windows and AutoCAD. Flash-ROM BIOS means updating the BIOS is like copying a file to BIOS, that easy! Supporting 72Pin SIMM means memory is upgradeable to 128MB. Supporting Weitek 4167, Programmable Fast I/O, Bus-Mastering VLB, and a lot more! We combined this machine with 340MB, 8MB RAM, 15" Digital Controlled monitor just to make sure it will roll years down the road!

See this machine with OS/2 V2.1 running in our showroom!

- Recommended Upgrades:
- Diamond Stealth Pro/Viper.....add\$110/210
- Promise 1/4/16MB Cache VLB 4030VL.....add\$183/307/775
- Western Digital HD 213/250/420MB.....add\$-85/-60/120
- UltraStor 34F/BusLogic BT445S/AIR + SCSI HD.....add\$Call
- Premium Full Tower.....add\$20
- KFC 14/17" Multisync Digital Monitor.....add\$-90/335
- Sony/NEC/Viewsonic/Nanao/Mag.....add\$Call
- Mouse/DOS V6.0/Windows V3.1.....add\$Call/49/59

Add and subtract to make your dream machine!

- Monochrome Graphic Printer Card.....\$12
- 16Bit 512K/1MB Trident SVGA 1024x768.....\$35/50
- 16Bit 1MB Tseng-4000 72Hz 32K Color.....\$75
- Tseng ET4000/W32 VLB 1280x1024 16.7M Color.....\$95/125
- SPIDER Cirrus Logic VLB 1MB/2MB.....\$95/135
- SPIDER Cirrus Logic VLB Plus 1MB/2MB.....\$118/158
- SPIDER Black Widow VLB 1MB/2MB.....\$215/275
- Orchid Fahrenheit 1280 ISA 1MB VRAM.....\$155
- Orchid Fahrenheit VLB STD (Upto 50MHz) 1/2MB.....\$135/175
- Orchid Fahrenheit VLB VA (Upto 50MHz) 1/2MB.....\$195/235
- Orchid Celsius VLB 1MB/2MB.....\$215/275
- Orchid P9000 VLB 3MB.....\$345
- Diamond Speedstar Pro VLB 1MB/2MB.....\$110/150
- Diamond Stealth 24 VLB 1MB DRAM S3-805.....\$155
- Diamond Stealth Pro VLB 1/2MB VRAM S3-928.....\$265/325
- Diamond Viper VLB 2MB VRAM 44M Winmarks.....\$365
- Genoa WindowVGA VLB 1MB.....\$115
- AIR Star2000 VLB w/ Weitek Power 9000 2MB.....\$370
- ATI Ultra Pro VLB 1MB/2MB VRAM 30M Winmarks.....\$270/330
- Monitor:
- 14" Monochrome Monitor.....\$90
- Impression 14" 1024x768x0.39DP.....\$205
- Impression 14" 1024x768x0.28DP.....\$250
- Impression 14" 1024x768Nix0.28DP.....\$270
- Impression 17" 1280x1024x0.26DP, BEST BUY!!
- Exactly MAG 17" like, just logo is different!.....\$885
- KFC 14" Multisync, 1024x768Nix0.28DP
- Digital-Control, Non-Glared.....\$355
- KFC 15" Multisync, 1280x1024Nix0.28DP
- Digital-Control, Non-Glared, Flat-Screen.....\$445
- KFC 17" Multisync, 1280x1024Nix0.26DP
- Digital-Control, Non-Glared, Flat-Screen.....\$780
- MAG 15F 15" 0.28DP 30-68KHz, 1280x1024NI.....\$500
- MAG 17F 17" 0.26DP 30-68KHz, 1280x1024NI.....\$930
- Viewsonic 5E 14" 0.28DP 1024x768NI 72Hz.....\$355
- Viewsonic 6E 14" 0.28DP 1024x768NI.....\$305
- Viewsonic 15 15" 0.28DP 1280x1024NI Digi. Cntrl.....\$505
- Viewsonic 17 17" 0.28DP 1600x1280NI Digi. Cntrl.....\$1050
- Viewsonic 20 20" 0.28DP 1600x1280NI Digi. Cntrl.....\$1660
- Viewsonic 21 21" 0.26DP 1600x1280NI Digi. Cntrl.....\$2040
- Nanao F340iW 15" 0.28DP 1024x768NI.....\$655
- Nanao F550iW 17" 0.28DP 1280x1024NI.....\$1075
- Nanao F560i 17" 0.26DP 1280x1024NI.....\$1650
- Nanao F660i 20" 0.31DP 1600x1280NI Trinitron.....\$2450
- Nanao F750i 21" 0.31DP 1600x1280NI.....\$2060
- NEC 3FG6 15" 0.28DP 1024x768NI 60Hz.....\$575
- NEC 4FG6 15" 0.28DP 1024x768NI 76Hz.....\$675
- NEC 5FG6 17" 0.28DP 1024x768NI.....\$1070
- NEC 6FG6 21" 0.28DP 1280x1024NI.....\$2300
- NEC 3FG/4FG Filtering Lense.....\$75
- NEC 5FG/6FG Filtering Lense.....\$110/185
- Sony 1430 14" 1024x768 0.25DP.....\$565
- Sony 1730 17" 1024x768 0.25DP.....\$960
- Sony 2036 20" 1280x1024 0.30DP MPRII.....\$1990
- Monitor:
- Zoltrix Sendfax 96/24 Int. 9600 Send Fax/2400 Data.....\$27
- Zoltrix Standard Int. 96/24 9600 S/R Fax/2400 Data
- + Bitfax for Windows + MNP5 Software.....\$48
- Zoltrix Enhanced Int. 96/24 9600 S/R Fax/2400 Data
- + hardware MNP5 + V.42bis Compression.....\$86
- Zoltrix 14.4K S/R Fax/Data V.32Bis, V.32, V.42Bis, V.42,
- MNP5 + Bitcom + Bitfax Internal/External.....\$140/175
- US Robotics Sportster 14.4K Data/Fax
- V32.bis, V.32, V.42 Internal/External.....\$165/195
- US Robotics Courier, HST, Dual Standard, etc.....\$Call
- Intel Satisfaxion Modem/400e Internal/External.....\$385/400
- New Intel Fax Modem 14.4K Internal/External.....\$179/199
- Fax/Printer/Modem:
- Teac 1.2M5.25"/1.44M 3.5"/2.88M 3.5".....\$53/48/95
- Teac Dual 1.44M & 1.2M.....\$135
- Toshiba 2.88M 3.5".....\$59
- Archive 250MB TapeBackup Internal.....\$150
- Colorado 250MB TapeBackup Internal.....\$170
- Tape Cartridge DC2120 for 250MB QIC-80.....\$16
- KeyBoard/Mouse/Software/Printer/Modem:
- 101 Chicony Enhanced.....\$20
- KeyTronic 101 Enhanced.....\$30
- Focus 2001 101 Enhanced Click.....\$36
- Focus 8000 111 with Calculator.....\$40
- Focus 9000 129 Programmable with Calculator.....\$60
- NorthGate OmniKey 101.....\$70
- NorthGate OmniKey 102.....\$70
- NorthGate OmniKey Ultra.....\$95
- MS Compatible 3-Button Mouse.....\$10
- Logitech First Mouse/Trackman.....\$30/75
- Logitech Mouseman Serial/Bus.....\$45/65
- Logitech Mouseman Cordless.....\$85
- MicroSoft Original Serial Mouse.....\$35
- New MicroSoft Ergonomic Serial Mouse V2.0.....\$55
- MS DOS 6.0/Windows V3.1 Original (Registerable).....\$49/59
- Windows NT V3.1 (Req. 12MB RAM & 75MB HD).....\$355
- IBM OS/2 V2.1.....\$170
- Standard Mini Tower with 200W PS.....\$55
- Premium w/PS Mini/Desktop/Med/Full Tower.....\$70/75/95/115
- Printer Cable 6"/10"/12".....\$5/7/9
- 486 CPU Cooling Fan.....\$15
- Chassis Second Cooling Fan 3" or 3.5".....\$20
- MultiMedia
- CD-ROM Drive:
- Toshiba XM-3401B SCSI 256K Cache
- 200ms, 330KB/Sec, Multi-Spin/Spd Internal.....\$395
- NEC CDR-84JD-1 Int. SCSI 280ms 300KB/S.....\$425
- Texel DM-3024 Int. SCSI 265ms Multi-Spin/Spd.....\$345
- DTC CD-ROM Kit w/ 3150 SCSI Adaptor & Sftwre.....\$75
- CD-ROM Caddy.....\$6
- MultiMedia Package:
- Creative Labs Multimedia Starter Kit includes:
- CD ROM, Snd Blaster Pro, MS BoksShlf, etc.....\$425

- Creative Labs Discovery CD 8 Upgrade Kit.....\$379
- Creative Labs Discovery CD 16 Upgrade Kit.....\$475
- Creative Labs Edutainment CD 16 Upgrade Kit.....\$495
- MediaVision Fusion CD 16 Internal Kit.....\$475
- MediaVision Pro 16 Multimedia System.....\$810
- MediaVision SubSystem CDPC XL.....\$1060

- Sound Card:
- ProAudio Spectrum 16 w/ SCSI Interface.....\$149
- ProAudio Studio 16 w/ SCSI Interface.....\$209
- Pro Movie Spectrum.....\$279
- Creative Labs Sound Blaster Deluxe.....\$89
- Creative Labs Sound Blaster Pro Deluxe.....\$115
- Creative Labs Sound Blaster 16 ASP.....\$205
- Creative Labs Video Blaster.....\$309
- Creative Labs Wave Blaster.....\$230

- HardDisk
- Western Digital
- 213MB IDE WDAC1210.....\$195
- 250MB IDE WDAC2250.....\$220
- 340MB IDE WDAC2340.....\$280
- 420MB IDE WDAC2420.....\$400

- Monitor
- 213MB IDE 7213AT 64K 15MS.....\$200
- 245MB IDE 7245AT 64K 15MS.....\$225
- 345MB IDE 7345AT 64K 14MS.....\$295
- 540MB IDE MXT540A 256K 8MS.....\$770
- 345MB SCSI 7345S 64K 14MS.....\$380
- 540MB SCSI MXT540S 256K 8MS.....\$770
- 1.2GB SCSI MXT1240S 512K 8MS.....\$1230

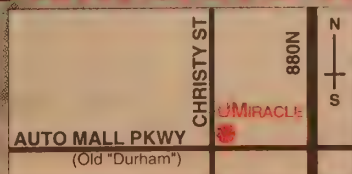
- Quantum
- 240MB IDE LPS240A 256K.....\$240
- 525MB IDE LPS525AT 256K.....\$595
- 240MB SCSI LPS240S 256K.....\$250
- 525MB SCSI LPS525S 256K.....\$595
- 700MB SCSI PD700 256K 10MS.....\$770
- 1.0GB SCSI P1050 512K 10MS.....\$919
- 1.2GB SCSI P1225 512K 10MS.....\$990
- 1.8GB SCSI P1800 512K.....\$1440

- Toshiba
- 877MB MK438FB SCSI-2 12MS.....\$820
- 1.0GB MK537FB SCSI-2 12MS.....\$870
- 1.2GB MK538FB SCSI-2 12MS.....\$940

- MicroPlus
- 1.0GB IDE MC2112A 5400RPM 10MS 3.5".....\$990
- 1.7GB IDE MC2210A 5400RPM 10MS 3.5".....\$1490

- Fujitsu
- 520MB IDE M2624T 64K 12MS 3.5".....\$675
- 425MB SCSI M2623SA 240K 11MS 3.5".....\$545
- 520MB SCSI M2624FA 240K 11MS 3.5".....\$665
- 1.2MB SCSI M2694SA 256K 10MS 3.5".....\$1075

# UMiracle Microsystems, Inc.



"The PC Enthusiastic Group"  
43033 Christy Street  
Fremont CA 94538  
Tel:(510)226-6746 Fax:226-6758

Off 880 Auto Mall Pkwy, or 660 Durham, go west and pass the 880 overpass, right on second light, we are inside Lincoln Executive Centre, the first business park on your right.



# Great Service Since 1984

## 5 Year Labor Warranty 1 Year Parts

### FCC CLASS B APPROVED SYSTEMS

| MODEL                        | BASIC SYS<br>+80MB HDD<br>+MPG CARD<br>+ 14" MONO<br>MONITOR | BASIC SYS<br>W/1.2&1.44 FDD<br>+120MB HDD<br>+SVGA CARD<br>+SVGA MON | BASIC SYS<br>w/1.2 & 1.44 FDD<br>+200MB HDD<br>+SVGA CARD<br>&SVGA MON |
|------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------|
| 486DX2-66<br>VLB w/128K      | \$978                                                        | \$1206                                                               | \$1246                                                                 |
| 486DX-50<br>VLB w/128K       | 916                                                          | 1144                                                                 | 1184                                                                   |
| 486DX-33<br>VLB w/128K       | 778                                                          | 1006                                                                 | 1046                                                                   |
| 486DX2-66<br>EISA/VLB W/256K | 1090                                                         | 1318                                                                 | 1358                                                                   |
| 486-50 EISA/VLB<br>W/256K    | 1020                                                         | 1248                                                                 | 1288                                                                   |
| 486-33 EISA/VLB<br>W/256K    | 882                                                          | 1110                                                                 | 1150                                                                   |
| 486DX2-66<br>ISA W/128K      | 970                                                          | 1198                                                                 | 1238                                                                   |
| 486-50 ISA<br>W/128K         | 908                                                          | 1136                                                                 | 1176                                                                   |
| 486SLC2-50<br>IBM MB W/64K   | 730                                                          | 958                                                                  | 998                                                                    |
| 486-33 ISA<br>W/128K         | 762                                                          | 990                                                                  | 1030                                                                   |
| 486SX-25<br>W/128K           | 572                                                          | 800                                                                  | 840                                                                    |
| 386-40<br>W/128K             | 535                                                          | 763                                                                  | 803                                                                    |
| 386SX-33                     | 486                                                          | 714                                                                  | 754                                                                    |
| 286-20                       | 459                                                          | 687                                                                  | 727                                                                    |

#### SYSTEM UPGRADES

##### VIDEO CARDS & MONITORS

|                                              |           |
|----------------------------------------------|-----------|
| ATI Ultra Pro VLB w/2MB                      | \$318     |
| ATI Ultra Pro w/2MB                          | 316       |
| ATI Ultra Plus w/2MB                         | 235       |
| ATI Ultra w/1MB w/Mouse                      | 163       |
| DIAMOND Viper VLB w/2MB                      | 370       |
| DIAMOND Speed Star Pro VLB w/1MB             | 110       |
| DIAMOND Stealth Pro VLB w/2MB                | 335       |
| DIAMOND Stealth 24 w/1MB (ISA/VLB)           | 153       |
| ORCHID ProDesigner IIS (EISA) w/1MB Hi-Color | 142       |
| ORCHID P9000 VLB w/3MB                       | 340       |
| ORCHID Fahrenheit VLB w/1MB                  | 143       |
| ORCHID Fahrenheit 1280 Plus w/1MB            | 138       |
| TESENG Lab VGA w/1MB                         | 73        |
| Cirrus Logic w/1MB Windows Accelerator       | 56        |
| Cirrus Logic VLB w/1MB                       | 89        |
| NEC 3FGE/4FGE 15" 1024x768 .28               | 585/685   |
| NEC 5FGE 17" 1024x768 .28                    | 1075      |
| SONY 1430/1730                               | 565/965   |
| VIEWSONIC 4E/6E                              | 265/288   |
| VIEWSONIC 5+7                                | 452/865   |
| VIEWSONIC 15/17                              | 488/1045  |
| VIEWSONIC 20/21                              | 1645/1965 |

##### CONTROLLER

|                                          |      |
|------------------------------------------|------|
| IDE 2FD/2HD                              | \$11 |
| IDE 2FD/2HD with 2S/1P/1G                | 13   |
| Ultrastor SCSI 14F (ISA)                 | 195  |
| Ultrastor SCSI 24F (EISA)                | 355  |
| Adaptec SCSI 1542 CK w/Kit (ISA)         | 234  |
| Adaptec SCSI 2742TK (EISA)               | 365  |
| VLB IDE Controller 2FD/2HD with 2S/1P/1G | 39   |

##### HARD DRIVES

|                     |         |
|---------------------|---------|
| 80MB 18ms IDE       | \$150   |
| 120MB 16ms IDE      | 159     |
| 170MB 16ms IDE      | 174     |
| 200MB 16ms IDE      | 196     |
| 250MB 14ms IDE      | 223     |
| 340MB 15ms IDE      | 282     |
| 540MB 12ms IDE/SCSI | 548/588 |

##### CASES

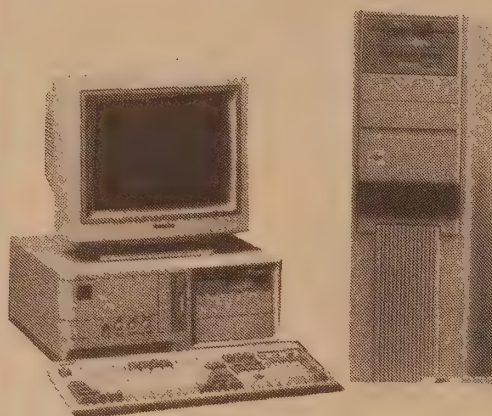
|                                          |       |
|------------------------------------------|-------|
| Tower Case full size, 6 drives, 285wps   | \$105 |
| Tower Case medium size, 6 drives, 230wps | 80    |
| Tower Case mini size, 5 drive, 230wps    | 52    |

##### MISCELLANEOUS

|                                           |         |
|-------------------------------------------|---------|
| AT I/O (2S/1P/1G)                         | \$11    |
| Serial Card/ Parallel Card                | 11      |
| Fax Modem (9600 Fax, 2400 Modem)          | 43      |
| Fax Modem (14,400 Fax, 14,400 Modem)      | 133     |
| 2400 Int. Modem                           | 26      |
| Serial Mouse                              | 11      |
| Auto Data Switch 4 Computers to 1 Printer | 39      |
| Auto Data Switch 2 Computers to 1 Printer | 25      |
| Power Center                              | 14      |
| Power Strip                               | 6       |
| Colorado Backup 120/250MB                 | 140/170 |
| 16-Bit Ethernet Card 10 Base-T/COAX       | 52      |
| SIMM/CPU/SRAM/DRAM                        | LOWEST  |
| Math-Co 387 DX-33/40                      | 59/60   |
| Math-Co 387 SX-25/33                      | 54/58   |

## LOOK FOR QUALITY

Custom Configuration  
Available!



#### BASIC SYSTEMS INCLUDE

- Motherboard & CPU
- 1MB RAM
- 1.2 or 1.44 Floppy Drive
- 1:1 2HD/2FD Controller with 2 Serial, 1 Parallel, 1 Game Ports
- Internal Clock/Calendar
- Baby Case & Power Supply
- 101 Enhanced Keyboard

#### PENTIUM UPGRADABLE SYSTEMS AVAILABLE!

## MULTI-MEDIA SPECIALIST

### MULTI-MEDIA UPGRADE KIT "Super Entertainment"

Includes: ONLY \$409

- Mitsumi CD-ROM
- Pro Audio Thunder Card
- FREE CD with 7 Software titles:

- Tempra Access (Photo CD)
- Microsoft Windows
- Microsoft Bookshelf
- Microsoft Works
- Mother Goose
- King Quest V
- Sound Library

#### BEST SELLING CD TITLES

|                                   |          |
|-----------------------------------|----------|
| Animals v1.0                      | \$19     |
| Arthur's Teacher Trouble          | 25       |
| Battle Chess                      | 18       |
| Beauty and the Beast              | 17       |
| Carmen San Diego                  | 23       |
| Compton's Encyclopedia            | 56       |
| Dinosaur Adventure                | 25       |
| Family Choice /Britannica         | 21       |
| Family Doctor                     | 21       |
| King Quest V                      | 18       |
| Loom                              | 18       |
| MacMillan Dictionary for Children | 32       |
| Mixed up Mother Goose             | 21       |
| Secret Weapons of Luftwaffe       | 18       |
| Sherlock Holmes - Cons. Detective | 18       |
| Sleeping Beauty                   | 20       |
| Space Adventure                   | 25       |
| So Much Shareware I, II, III      | 13,17,21 |
| Wing Commander & Ultima VI        | 24       |
| World Atlas                       | 17       |

#### CD-ROM DRIVES

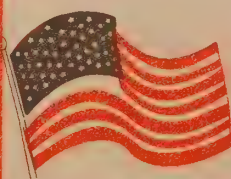
|                     |       |
|---------------------|-------|
| Mitsumi LU005 w/Int | \$169 |
| Panasonic 522/523   | 179   |
| Sony 31A w/Int      | 162   |
| Texel DM3024N SCSI  | 349   |
| Teac CD-50 SCSI     | 329   |
| Toshiba 3401B SCSI  | 399   |

#### SOUND CARDS

|                                                       |       |
|-------------------------------------------------------|-------|
| Sound Blaster Pro Deluxe                              | \$116 |
| Sound Blaster 16 ASP                                  | 196   |
| Pro Audio Thunder Media Spectrum 16                   | 136   |
| ATI Sound Card                                        | 85    |
| Sound Galaxy NX Pro Extra w/Speakers                  | 110   |
| Sound Galaxy NX Pro 16Bit<br>w/Microphone & Headphone | 156   |

Government, Corporate, University, & VAR  
Inquiries and PO's Welcome

Prices subject to change without notice. Not responsible for typographical errors.

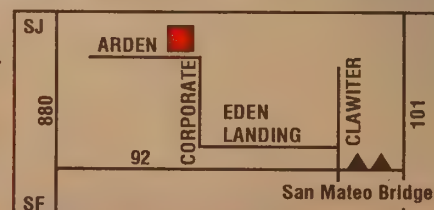


# MCT Technology

3518 Arden Road  
Hayward, CA 94545

## (510) 670-0636

FAX (510) 670-0790  
Hours M-F 9-6 SAT 10-4  
Pacific Time





## New Products

### PC HARDWARE

#### ULTIMATE COMPUTER PROTECTION

VIP—Versatile Instrument Protection—is designed to protect your computer equipment from problems

caused by the power supply and line surges. It offers Zero-Cross voltage to turn your computer and monitor on/off, delayed reboot when power returns after an interruption, surge and brown-out protection, and an adjustable electronic circuit breaker. Command Line Computers, Inc., 921 Kifer Rd., Sunnyvale, CA 94086. (408)735-7940.

#### PC ENER-G-SAVER

The PC Ener-g-saver combines a specially designed powerstrip with software to turn PCs into energy efficient machines, cutting your utility bills and helping to curb pollution. Connected to any IBM-compatible monitor, keyboard, and printer running under MS- or PC-DOS or Windows, it senses when the system is no longer in use and automatically switches into a power-saving, standby sleep mode, ready for use the moment the user presses a key or moves the mouse. With PC Ener-g-saver your older computer system will comply with the Energy Star guidelines designed by the Environmental Protection Agency to reduce personal computer power consumption. An on-screen configuration panel enables users to independently control monitor and printer power, each of which may be set to turn off at a specified time or after a period of idling without reuse. (\$89.95) PC Green Technologies, Inc., 1 Centerpointe Dr., #210, La Palma, CA 90623. 1-800-98-GREEN.

### SCANNERS & PRINTERS

#### TAMARACK COLOR SCANNER

The 1200C is a 1200dpi, 24-bit, color flatbed scanner with an attachment for scanning transparencies. It features an 8.5" x 11.75" scanning surface with the ability to accommodate full-size transparent documents, hardware gamma correction, two hundred adjustable levels of brightness and contrast, 1/8 to eight times zoom,

### UPDATES

❖ Aldus released **Aldus PageMaker 5.0 for the Macintosh**. Customers who purchased a retail copy of v4.2 after January 1, 1993, are eligible to receive 5.0 free with a product registration card and a dated proof of purchase. Those who upgraded to v4.2 from an earlier version may purchase 5.0 directly from Aldus for \$75. Aldus Corp., 411 First Ave. S., Seattle, WA 98104. (206)622-5500.

❖ Ares Software announced **FontMinder 2.0**, its font management utility for Windows. Existing owners can upgrade for \$29.95. Ares Software Corp., 565 Pilgrim Dr., Suite A, Foster City, CA 94404. (415)578-9090.

❖ Claris introduced **FileMaker Pro 2.1 for Windows and Macintosh**, offering expanded peer-to-peer networking support and other major productivity enhancements. Updates from FileMaker Pro 2.0 for Macintosh and Windows versions are \$20 (for shipping and handling costs only). Claris Corp., 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA 95052-8168. 1-800-544-8554.

❖ Digitalk released **SmallTalk/V v2.0 for the Macintosh**, a new version of its object-oriented programming environment. Registered users can buy the new version for a limited time at the special price of \$149. Digitalk, Inc., 9841 Airport Blvd., Los Angeles, CA 90045. (310)645-1082.

❖ InterCon Systems Corp. unveiled **InterPrint 1.1**, a greatly enhanced version of its UNIX print client software for the Macintosh. InterCon Systems Corp., 950 Herndon Pkwy., Herndon, VA 22070. (703)709-5500.

❖ Passport Designs announced upgrades to the PC and Macintosh versions of **Encore**, its popular music composing and notation software. Upgrades are available for \$99. Passport Designs, Inc., 100 Stone Pine Rd., Half Moon Bay, CA 94019. (415)726-0280.

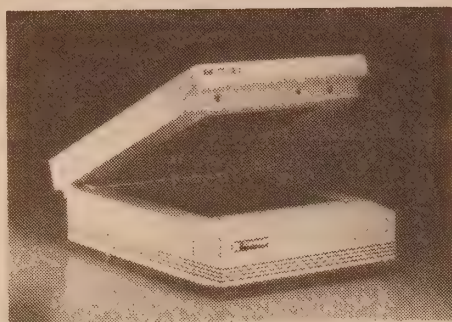
❖ Polaris Software is offering a free **PackRat 5.0** maintenance release to all registered owners. In addition, the company has extended its money-back guarantee to sixty days from the shipment date of the maintenance release, giving customers ample time to evaluate this new version. Polaris Software, Inc., 17150 Via Del Campo, Suite 307, San Diego, CA 92127. (619)592-7400.

❖ Software Publishing announced it is adopting a new **support warranty policy** that provides customers with unlimited free technical support on all products for ninety days after the customer's first technical support call. After the free ninety-day period, customers will continue to receive free automated technical support, and may elect to purchase additional live technical support. Software Publishing Corp., PO Box 54983, 3165 Kifer Rd., Santa Clara, CA 95056-0983. 1-800-234-2500.

❖ Stalker introduced **LineShare 2.0**. LineShare is a Control Panel that enables a Macintosh, using just one telephone line and one serial port, to have any number of communications servers open, making them all simultaneously available for incoming or outgoing calls. Stalker Software GmbH, c/o Global Way, PO Box 1631, Campbell, CA 95009-1631. 1-800-262-4722.

❖ Systems Compatibility Corp. introduced **Outside In for Windows v2.1**. This upgrade adds viewers for fifteen new file formats, support for OLE objects in word processing files, optional file conversions, and more. The 2.1 update without conversions costs \$29. The complete update with conversions is \$49. Systems Compatibility Corp., 401 N. Wabash, Suite 600, Chicago, IL 60611. 1-800-333-1395.





built-in SCSI for Macintosh computers, PC SCSI for Windows, and automatic switching input voltage between 90V and 260V. It is currently bundled with a full version of Adobe Photoshop 2.5 for the Mac and a full version of Aldus Photostyler along with the SCSI interface card for Windows. (Introductory price is \$1995. Introductory price for the Slide Kit is \$795) Tamarack Technologies, Inc., 1544 Centre Pointe Dr., Milpitas, CA 95035. 1-800-643-0666.

## OKIDATA MICROLINE DOT MATRIX PRINTERS

The Microline 395 and 395C dot matrix printers are rugged 24-pin machines that feature increased speed and enhanced paper handling capabilities for users in demanding business environments. Offering print



speeds 17% faster than their predecessors, the ML393 and 393C Plus printers, these new printer speeds range from 607cps in draft mode to 162cps in letter-quality mode. Advanced front panel controls ensure ease of operation with handy

selection of print mode, type style, size, and paper-handling features. Both parallel and serial interfaces are standard for easy attachment to a wide variety of systems. (ML395, \$1499) Okidata, an OKI America Co., 532 Fellowship Rd., Mount Laurel, NJ 08054. (609)235-2600.

## UNIX HARDWARE

### NEWSPRINTER 20 HI-FEEDER

The NeWSprinter 20 Hi-Feeder quadruples the paper capacity of SunPics' PostScript language compatible network printer, NeWSprinter 20, from five hundred to two thousand total sheets. Hi-Feeder comes SunReady—out of the box and with no extra tools, it attaches to NeWSprinter 20 by placing the printer on top of the feeder and plugging the original power cord into Hi-Feeder. It requires neither a special stand nor extra space on the desktop. It operates at the printer's full rated speed of 20 pages per minute. Like all Sun printers, Hi-Feeder with NeWSprinter 20 is driven by NeWSprint

software, a UNIX print management software solution that runs under Solaris 1 or Solaris 2 operating environments. (\$1295) SunPics, a Sun Microsystems, Inc. Business, 2550 Garcia Ave., Mountain View, CA 94043-1100. 1-800-USE-SUNX.

### MARRIX DT SPARCSTATION 10 CLONE

The Marrix dt is a full-featured SPARCstation 10 clone workstation. The system comes standard with a 50MHz TI SuperSPARC processor module, 32MB of RAM, 424MB internal hard disk, a 19" monochrome monitor, keyboard, mouse, Solaris operating system with documentation, two MBus, four SBus Ethernet, SCSI 2, two serial ports, one Centronics parallel port, and a 16-bit CD-quality audio external speaker. The Marrix dt series supports 35MHz, 40MHz, and 50MHz uniprocessors and supports multiprocessing upgradability to four processors. Aries Research provides an eighteen-month, return-to-factory parts and labor warranty. (\$17,995) Aries Research, Inc., 46791 Fremont Blvd., Fremont, CA 94538. (510)659-1544.

### ACER POWERPORTABLE

Designed for RISC System/6000 customers who need to use their AIX applications away from the office, the POWERportable is a 17lb., AC-powered, portable UNIX workstation. Based on the IBM RISC System/6000 POWER Station 200 workstation, the POWERportable runs AIX v3.2. Users can download software from any RISC System/6000 machine, work with it on the road, then upload it. The unit offers Gt1 2D graphics; a 10.4", 640 x 480 pixel, active matrix, thin film, color LCD (capable of supporting external CRTs to a maximum resolution of 1280 x 1024); a 2.88MB floppy disk drive; a 457MB or 1.2GB removable hard disk drive; 16MB of RAM (expandable to 64MB); and a keyboard with integrated trackball. Also included is Ethernet, as well as SCSI, parallel, serial, and external CRT ports. (\$13,495. Available in the US exclusively from an IBM fulfillment center, 1-800-366-3355) Acer America Corp., 2641 Orchard Pkwy., San Jose, CA 95134. (408)432-6200.

### VIDEO BOARD FOR SUN WORKSTATIONS

Parallax Graphics introduced three new products for working with real-time video applications on Sun workstations. PowerVideo, a single-slot SBus board with 24-bit color and hardware compression/decompression, is ideal for high-quality multimedia applications. MultiVideo, also a

single-slot SBus board, offers new levels of price-performance for 24-bit color applications not requiring compressing. The Parallax Video Development Environment, for developers who wish to write custom applications for these two new hardware products, will speed the time to market by minimizing the software development cycle. (PowerVideo, \$5495; MultiVideo, \$2995; Video Development Environment software, \$1995) Parallax Graphics, Inc., 2500 Condensa St., Santa Clara, CA 95051. (408)272-2220.

## REVIEWS

### GAME REVIEW

By Mike Markowitz

#### KID CAD

Designed By: Mark Loparco

Lead Programmer: Alex Tankelevich

Published By: Davidson

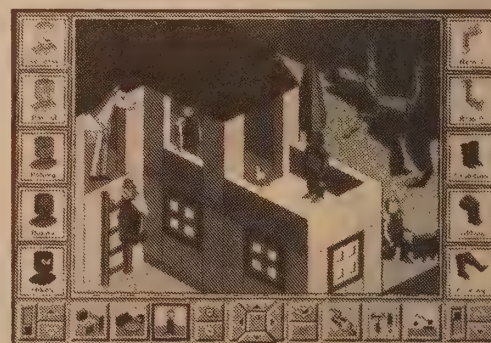
For: MS-DOS with Windows 3.1, requires 80386 or above, 4MB RAM; VGA or Super VGA graphics, Sound Blaster compatible audio card recommended

List Price: \$49.95

Software that creates three-dimensional models on a two-dimensional computer screen is generally hard to use, harder to learn, and hardest of all to program.

KidCAD is an ambitious software toy that delivers three-dimensional modeling for kids under the formidable constraints of Microsoft Windows.

You can think of KidCAD as a set of virtual Lego blocks, or perhaps a doll house



construction kit. You begin by choosing a background: city, town, or farmland.

The screen shows a plot of empty land. Along the bottom and sides of the screen are a variety of controls and tool icons. You can zoom three levels in or out, and toggle between ground-level (orthogonal) and elevated (isometric) views. Rotation is

Continued on page 192



# 386DX-40MHz

## MINI TOWER SYSTEM

80386DX 40MHz CPU • 1MB RAM  
3.5" 1.44MB Floppy Drive  
IDE 2/ Hard /2 Floppy Controller  
128K Cache • Keyboard  
Clock/Calendar • Monitor not included  
#1794643

# \$299

## MORE COMPUTER BUYS FROM FRY'S!

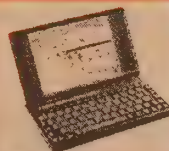
# 486SLC-2/50MHz

## IBM MANUFACTURED COMPUTER SYSTEM

IBM 486SLC 2/50MHz CPU  
Paradise WD90 C31 Windows - accelerator built-in  
Resolution up to 1280 x 1024 24 BIT  
IDE Controller • 5 available 16 bit slots  
2 Serial/1 Parallel  
Monitor and keyboard not included  
#1804212

# \$599

**hp** HEWLETT  
PACKARD  
Authorized Dealer  
A 50 YEAR TRADITION OF QUALITY.  
HP DELIVERS PC PRODUCTS YOU CAN DEPEND ON.



## OmniBook 300 Superportable PC

386SX CPU • 2MB RAM • 40MB Hard Drive  
2 PCMCIA Type II Slots • Serial/Parallel  
MS Windows • MS Word For Windows  
Laplink Remote Access • 3lbs. • Mouse #1794333

# \$1797

**TEXAS**  
INSTRUMENTS



## TRAVEL MATE 4000 WINDX2/50MHz 200MB COLOR NOTEBOOK

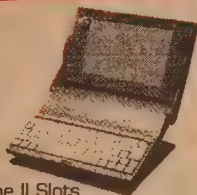
486DX2-50MHz CPU • Math Coprocessor  
4MB RAM Expandable to 20MB  
Active Matrix Color Display • 8KB Internal Cache  
1MB VRAM • Fast Ti BUS Technology  
200MB Hard Drive • 3.5" 1.44MB Floppy Drive  
5.6 lbs. • Microsoft Ballpoint with Quickport  
Serial/Parallel VGA/PS/2 Mouse/Ext KB #1812741

# \$4797

## 1.9 lbs. SUB-NOTEBOOK

**RUNS ON 4 AA BATTERIES  
UP TO 10 HOURS**

2MB RAM • 2MB ROM • 2 PC MCIA Type II Slots  
Fax/Modem Built-In • Serial/Parallel Ports  
640 X 400 Resolution **Pre-loaded Software:**  
DR DOS • Bitfax • LapLink XL • BitCom  
DataSel Gold Contact Manager • By OMRON #1809653  
Batteries not included.



# \$599

## TOSHIBA T1900/200 486SX-20MHz MONO NOTEBOOK

3.5" 1.44MB FLOPPY • SERIAL PARALLEL  
4MB RAM • 200MB HARD DRIVE  
6.4 lbs. • MS DOS 6.0 #1812958



# \$2199

## TOSHIBA T1900C/120 486SX-20MHz 120MB COLOR NOTEBOOK

486SX-20MHz CPU • 4MB RAM  
120MB Hard Disk • 3.5" 1.44 Floppy Disk Drive  
Serial/Parallel • DOS 6.0 • 6.4lbs. #1800986



# \$2649

## 486SLC 25MHz 120MB COLOR NOTEBOOK

486SLC 25MHz CPU • CYRIX SLC Chip with 1K Cache  
4MB RAM • 120MB Hard Drive  
3.5" 1.44MB Floppy Drive • MS DOS • MS Windows  
Winfax • 96/24 Fax/Modem • Trackball #1767979



# \$2399

## PACIFIC DATA PRODUCTS POSTSCRIPT FOR HP4 LASER PRINTER

Requires minimum  
4MB additional memory. #1802276

# \$299<sup>99</sup>

## 3.5" DS/DD FORMATTED DISKETTES

**LIFETIME WARRANTY**

# 48¢

EACH  
Sold in packs of 25 only for \$11<sup>99</sup>.  
#1766761

## MID-SIZE TOWER CASE WITH 200 WATT POWER SUPPLY

#1742440



# \$88

## 3.5" DISKBOX

Holds 50 3.5" Diskettes  
by Inland #1666988



# \$3<sup>99</sup>

## MICROTRAC PC

Size 2.8" x 2.0" x 1.25" • Weight 4.0 Oz  
50 - 9600 DPI • Microsoft Compatible  
Mounting Bracket Included  
Serial & PS/2 Connectors  
Drag-Lock Button  
#1621903



# \$58<sup>88</sup>

**Home of Fast, Friendly,  
Courteous Service**

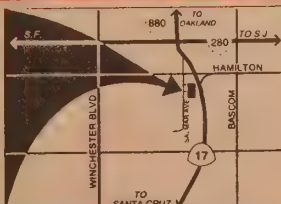
# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**VISA AND  
MASTERCARD**

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

### SUNNYVALE

1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

### FREMONT

440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

### PALO ALTO

340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



## 386SX 25MHz COMPUTER SYSTEM

80386SX 25MHz CPU  
2 Hard /2 Floppy Disk Controller  
1MB RAM Expandable to 16MB  
3.5" 1.44MB Floppy Drive  
Keyboard • Clock/Calendar  
Case/Power Supply  
Monitor Not Included  
#1659210

**\$249**

## 486DLC 33MHz COMPUTER SYSTEM CYRIX 486DLC CPU

80486DLC 33MHz CPU  
1MB RAM Expandable to 32MB  
2 Hard/2 Floppy Controller  
3.5" 1.44MB Floppy Drive • Keyboard  
Clock/Calendar • Case / Power Supply  
3M Cleaning Kit  
Monitor Not Included  
#1743603

**\$349**

## 486DX 33MHz MINI TOWER SYSTEM

80486DX 33MHz CPU  
1MB RAM Expandable to 32MB  
3.5" 1.44MB Floppy Drive  
2 Hard /2 Floppy Controller  
Keyboard • Clock/Calendar  
Case/Power Supply  
Monitor Sold Separately  
#1727092

**\$549**

## IBM MANUFACTURED 486SLC2-50MHz COMPUTER SYSTEM

IBM 486SLC 2/50MHz CPU  
Paradise WD90 C31 Windows - accelerator built-in  
Resolution up to 1280 x 1024 24 BIT • IDE Controller  
5 available 16 bit slots • 2 Serial/1 Parallel  
Monitor and  
keyboard  
not included  
#1804212

**\$599**

## TEXAS INSTRUMENTS TRAVEL MATE 4000 WINDX2/50MHz 200MB NOTEBOOK

486DX2-50MHz CPU • Math Coprocessor  
8MB RAM Expandable to 20MB  
8KB Internal Cache • 1MB VRAM  
Fast TI BUS Technology • 200MB Hard Drive  
3.5" 1.44MB Floppy Drive  
5.6 lbs. • Microsoft Ballpoint with Quickport  
Serial/Parallel VGA/PS/2 Mouse/Ext KB  
#1812730

**\$3298**

## TEXAS INSTRUMENTS TRAVEL MATE 4000 WINDX2/50MHz 200MB COLOR NOTEBOOK

486DX2-50MHz CPU • Math Coprocessor  
4MB RAM Expandable to 20MB  
Active Matrix Color Display • 8KB Internal Cache  
1MB VRAM • Fast TI BUS Technology  
200MB Hard Drive • 3.5" 1.44MB Floppy Drive  
5.6 lbs. • Microsoft Ballpoint with Quickport  
Serial/Parallel VGA/PS/2 Mouse/Ext KB  
#1812741

**\$4797**

## MOTHERBOARDS

**386SX-25MHz**

#1634334

**\$88**

**386DX-40MHz NC**

#1810543

**\$129**

**386DX-40MHz**

#1735200

**\$179**

## LOCAL BUS VESA

**486DX-33MHz**

#1754962

**\$459<sup>95</sup>**

**486DX2-66MHz**

#1754973

**\$749<sup>95</sup>**

## Canon BJ-230

### DESKTOP PRINTER

Handles all your essential business printing needs, including large formats, up to 11" X 17". Laser quality printing at 360 X 360 dpi. Laser quality, without laser price. For faster printing, supports bi-directional graphs. The BJ-230 rivals the speed of a 4 ppm laser printers. Compact size save space in a small office setting. Gives all your business documents a professional look.  
#1805305

**\$419**

## SHARP LASER PRINTER

8PPM, 300 DPI addressable w/ 600 DPI Print engine, PCL 5, HRT, 1MB Ram, 500 sheet cap., Dual 250 Sheet trays, 15,000 pages of supplies, sleep mode, parallel interface, 2 font card slots.

Sharp JX-9600  
#1813513

**\$749**





Charlie Chip Says:  
"Your Best Computer Buys Are  
Always At..."

# Fry's ELECTRONICS

## DATA CARTRIDGE CORNER

DYSAN  
SAVE THE THINGS THAT MATTER MOST™  
**120MB  
DATA  
CARTRIDGE**

1/4" tape, Unformatted  
DY2120 #1781496

**\$14.99**

DYSAN  
SAVE THE THINGS THAT MATTER MOST™  
**150MB  
DATA  
CARTRIDGE**

1/4" tape, Unformatted,  
Dual Belted, Lifetime Warranty  
DY6150 #1786620

**\$17.95**

**14 + 1  
1024 X 768  
28 DOT PITCH  
NON-INTERLACE  
SVGA MONITOR  
EQUIVALENT TO 15" SIZE**

1024 X 768 • 258 X 185 Display Area  
72Hz Refresh  
#1804234

HANA

**\$349.95**

## TV CARD

Turn your VGA monitor into a TV. Watch TV  
and alternate between both modes.  
Internal TV card • Works on IBM & compatibles.  
Accent Data Solutions #1812914

**\$99**

**1024 X 768  
14" SVGA  
MONITOR**

1024 X 768 • .39mm Dot Pitch • Interlaced

1439  
#1825563

**\$199.95**

FELLOWES,  
**MULTI MEDIA  
STORAGE  
TRAY**

Stores 80- 3.5" Diskettes  
or 60- 5.25" Diskettes  
or 16- CD ROM or Data Cartridges

#1648928

**\$4.99**

**PERFECT POINTING PERFORMANCE  
ACECAT PC  
GRAPHICS TABLET  
& MOUSE EMULATOR**

1000 Lines Per Inch  
5" X 5" Active Area. Includes  
Stylus-Pen and Comprehensive  
Utilities Diskette Including Custom  
Drivers for Mouse, Windows, Control Panel and ADI.  
#1659900

**\$109.99**

**DETER DATA DISASTER  
BACK UPS 250**

Modified Sine wave output safer  
for all equipment types than square wave  
250 Volt/AMP Backup Power Supply  
2 Outlet • EMI/RFI filtering  
30 Minutes Back-Up  
At 250VA #1651164

**\$109.99**

Easy  
OPTIONS™  
by IBM®  
**250MB  
EXTERNAL  
TAPE BACK-UP**

Data and power cables with software and  
tape.  
Model TD632  
#1780185

**\$348**

**8500VL  
32-BIT  
VESA LOCAL BUS  
SVGA CARD**

16 Million Colors 24-Bit • 1MB RAM  
32-Bit VESA  
#1763816

**\$139**

INTERLINK  
**PortaPoint.**

Gently touch the unique  
sensor button to control  
both speed and  
direction. PortaPoint  
comes complete with a  
PS/2 adapter, a  
quick-release Velcro  
attachment and a  
3 1/2" DOS driver  
diskette (5 1/4"  
available).  
#1747825

**\$59.99**

**ISA/20 SCSI**

16bit SCSI controller  
2.8/1.44 FFD/7 SCSI HD  
WID/DOS/NOVELL/UNIX/OS2  
#1810842

**\$139.95**

REDUCE RETINAL RADIATION  
MEMOREX  
COMPUTER SUPPLIES  
**UNIVERSAL  
RADIATION  
FILTERS**

For monitors up to 15" Diagonal  
99% Glare Reduction  
98% Very Low Frequency  
Extremely Low Frequency  
E-Field Radiation Protection. #1672921

**\$49.95**

**SPACE SAVING SOLUTION  
UNIVERSAL  
SYSTEM  
STAND**

Vertical CPU stand frees up  
valuable desk space.  
Adjustable stand holds units  
from 4.5" to 6.25" #1619403

**\$5.99**

**FULL METAL JACKET  
6 OUTLET 3 PHASE  
FULL SURGE  
PROTECTOR**

Clamping Response  
Time <1 Nanosecond  
Energy Dissipation 50/150 Joules  
#1695713

**\$7.95**

**MULTIMEDIA  
DESKTOP CASE**

Multimedia Case w/ 2 speakers  
volume control • microphone plug  
and much more  
#1813878

**\$159.95**

**QSP ETHERNET  
16C CARD**

16bit Ethernet  
10 Base-T • Twisted Pair  
RJ-45 • DB15  
BNC • Wide range IRQ  
#1802388

**\$79.95**

**PARALLEL  
PRINTER  
BUFFER**

EXPANDABLE TO 8MB  
USING 1 X 8 SIMM MODULES  
27K Per Second Input  
15K Per Second Thru-put #1711462

**\$144.95**

**PERIPHERAL VERSATILITY  
DB25  
2 POSITION SWITCH BOX**

Access 2 computers to 1 printer  
or 2 printers to 1 computer.  
Serial/Parallel DB25-02 #1432891

**\$6.99**

**BLACK  
101 - KEY  
KEYBOARD**

By Antech  
#1780738  
**\$49.99**

HOME OF FAST, FRIENDLY,  
COURTEOUS SERVICE  
**Fry's ELECTRONICS**  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**STORE HOURS  
MON - FRI  
8AM - 9PM  
SATURDAY  
9AM - 8PM  
SUNDAY  
9AM - 7PM**

VISA AND  
MASTERCARD



## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**SUNNYVALE**

1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**

440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**

340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044





Authorized Reseller

# Apple® Macintosh® Computers and Accessories



Authorized Reseller

## Apple® Macintosh® Portrait Display

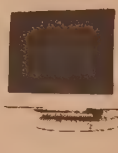


The Apple® Macintosh® Portrait Display is a high-resolution 15-inch monochrome display. It's ideal for work with desktop publishing, word processing, and general productivity applications. The full 8 1/2 x 11-inch page display shows a complete page of information just as it will appear in print. That makes it easy to preview and edit documents and add text or graphics. You'll also find that page layout of text and graphics will be more accurate and much more efficient. And you'll see clearly how the flatter screen and higher refresh rate can minimize flicker, and provide excellent focus for sharp, clear images and text.

#1714203

**\$724**

## Apple® Macintosh® 16" Color Monitor



See more of your work—in bright, vivid color—in a more comfortable and efficient environment with the Apple® Macintosh® 16" Color Display. It delivers a combination of performance, comfort, and convenience not found in other displays. The 16-inch screen gives you 70 percent more work area than standard monitors. Not only can you see multiple windows of text and color graphics at the same time, you can also access disk volumes and the Trash while a full page-width document is open.

#1721513

**\$1299**

## Apple® Macintosh® 21" Color Display



The Apple® Macintosh® 21" Color Display sets the standard for large-screen color displays, and lets you work with two full pages of text and graphics in brilliant color. The 21" Color Display is ideal if you need a high-performance, large-screen color display for presentations, page layouts, engineering design, or video applications. The 21-inch screen provides more than three times the screen area of standard displays to give you more room to work—and increase your productivity. The Macintosh 21" Color Display lets you work with as many colors as your video card will support. You can work with different applications simultaneously, integrate color graphics into presentations and publications, and prepare video and animation presentations to use with television monitors or videocassette recorders. All in brilliant, vivid, pure color.

#1721524

**\$2999**

## Apple® 14" Color Trinitron Display

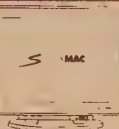


The new Apple® Macintosh® Color Display provides the high quality and practical ergonomic design you expect from Apple. Its color and gray-scale capabilities give you versatility for a variety of projects. And its enhanced electronics allow this 14" monitor to display full-color images with photographic quality. The display's low, stable center of gravity keeps it from being easily tipped over, and its built-in tilt-and-swivel base makes adjustment easy.

#1738513

**\$499**

## SUPERMAC TECHNOLOGY SUPERMATCH 17T 17" TRINITRON COLOR DISPLAY



Low-cost, large-screen color for business productivity applications. This 17" color display includes multiple modes, with supports for 1024 X 768 full-page-plus—the workspace of a 20" display, 832 X 624 WYSIWYG, and 640 X 480 magnified view resolutions; microprocessor-based controls for customizing your display to your environment; antistat technology; accurate 6500°K white point and "plug and play" compatibility with the motherboard graphics of the Macintosh Quadra.

#1822238

**\$1099**

## SUPERMAC TECHNOLOGY SUPERMATCH 17 17" MULTIMODE COLOR DISPLAY



Low-cost, large-screen color for business productivity applications. This 17" color display includes multiple modes, with supports for 1024 X 768 full-page-plus—the workspace of a 20" display, 832 X 624 WYSIWYG, and 640 X 480 magnified view resolutions; automatically syncs to all popular Macintosh and PC timing, including VGA, SVGA and VESA; microprocessor-based controls for customizing your display to your environment; accurate 6500°K white point and "plug and play" compatibility with the motherboard graphics of the Macintosh Quadra.

#1822249

**\$899**

## SUPERMAC TECHNOLOGY E-MACHINE T16 II 16" MULTIMODE COLOR DISPLAY



The T16 II delivers 70-percent more display area providing you with elbow room you need for full-page layouts for easily working with several applications in multiple windows at the same time. Its multiple display resolutions range from 640 X 800 to 1024 X 768. Automatically syncs to all popular Macintosh and PC timings, including VGA, SVGA and VESA; plus the T16 II works with all on-board graphics on the Macintosh Quadra and Centris—right out of the box.

#1822113

**\$1299**

## SUPERMAC TECHNOLOGY E-MACHINE POWERLINK™ PRESENTER MINI-DOCK FOR DUO NOTEBOOKS

Plug in PowerLink Presenter to your Apple PowerBook Duo and you instantly have created a powerful presentation system you can take with you anywhere. It provides up to 256 colors (8-bit) on displays from 12" 16/17 inches in size, at resolutions from 630 X 800 to 832 X 624. And you can even use it display on a standard TV set using its on-board video encoder and NTSC video connector.

#1822116

**\$449**

## SUPERMAC TECHNOLOGY E-MACHINE FUTURA™ SX 24-BIT COLOR GRAPHICS CARD



Futura SX is the most economical way to begin working with a large-screen, 24-bit color. A great fit for desktop-publishing applications, but also an ideal solution for business productivity. This value-packed card includes on-board accelerated 24-bit color graphics on displays from 12"-16/17" in size (512 X 384 to 624 resolution), plus 8-bit color graphics on up to 20" displays (1024 X 768 resolution). Includes a Virtual Desktop™, hardware pan and zoom, switch on the fly.

#1822135

**\$399**

## SUPERMAC TECHNOLOGY E-MACHINE FUTURA™ MX 24-BIT COLOR GRAPHICS CARD



Choose Futura MX and get large-screen, 24-bit color for your full-page projects with room to spare! It includes on-board, accelerated 24-bit color graphics on displays from 12-20 inches in size, at resolutions from 640 X 800 to 1024 X 768. Also includes a Virtual Desktop™, hardware pan and zoom, switch on the fly, and NTSC and PAL timing support. Installs in a single NuBus slot.

#1822146

**\$699**

## SUPERMAC TECHNOLOGY E-MACHINE SPECTRUM/8™ 8-BIT COLOR GRAPHICS CARD



Low-cost, 8-bit, large-screen color graphics card for using the Macintosh LC, Ilii, and NuBus Macintosh systems with 12"-21" displays at resolutions from 512 X 324 to 1152 X 1152 X 870 pixels (the Series III version supports 13", 15", 19" and 20" displays at resolutions from 640 X 800 to 1024 X 768. Includes hardware pan and zoom. Installs in a single NuBus slot.

#1822331

**\$449**

## SUPERMAC TECHNOLOGY VIDEOSPIGOT®



Make movies on your Macintosh today!

The easiest way to get full motion video on your Macintosh. This single-slot, digital-video frame grabber enables you to make QuickTime movies with any Macintosh LC, Ilii, or NuBus system. Works with all popular graphics cards and displays for the Macintosh on-board graphics. Capture video and store it as fully digital data on an ordinary hard disk or optical cartridge for use with QuickTime-compatible versions of applications such as Adobe Premiere, Aldus Persuasion, MacroMind Director™, or Word Perfect. Installs in a single NuBus slot.

#1822353

**\$399**

## SIGMA DESIGNS PageView GS™



Full-page greyscale display system for the Macintosh computer. PageView GS is a cost-effective flat 15" greyscale portrait display ideal for displaying a full page of text or graphics. It can view an entire page of images without scrolling. PageView GS also meets the latest Swedish guidelines for reduced VLF/ELF magnetic field emissions for your comfort and peace of mind. Other ergonomic features include sharp focus, high refresh rate, tilt/swivel base and optional anti-glare, anti-static coating. And PageView GS comes in two colors - granite or platinum - designed to match your Macintosh computer.

#1764987

**\$549**

## SIGMA DESIGNS ColorMax™



Color display for Macintosh PowerBook 160, 180 and Duo computers

ColorMax 15 is a desktop plug-and-play color display ideal for use when creating high impact color presentations, multimedia demos and other serious color graphics applications in PowerBook computing environment. ColorMax 15 works with Macintosh PowerBook 160 and 180, and PowerBook Duos with Duo Dock and Duo MiniDock. It also works with Macintosh LC, Ilii, Ilii, Ilii, Ilii and Quadra series computers. #1764998

**\$499**

## SIGMA DESIGNS ColorMax™



20

Color display for Macintosh PowerBook 160, 180 and Duo computers

#1809734

**\$1999**

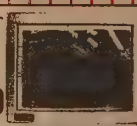
## 640 x 480 14" MAC COLOR MONITOR



.28 Dot Pitch • 640 x 480  
With Cable  
CM2080 #1748516  
MAGNAVOX

**\$399**

## RasterOps 20" 1152 X 870 MULTISCAN MONITOR



20" diagonal upfront AJT  
75Hz Trinitron  
#1748099

**\$2399**

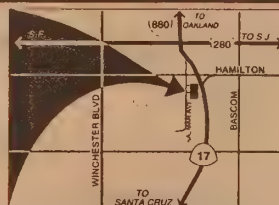
Home of Fast, Friendly,  
Courteous Service

# Fry's ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

HOURS:  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700

CORPORATE P.O. FAX# (408) 364-3790

VISA AND  
MASTERCARD

**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044





Authorized Reseller

# Apple® Macintosh® Computers and Accessories



Authorized Reseller

## Apple® StyleWriter® II Printer



The Apple® StyleWriter® II printer, laser-quality printing at an affordable price.

- 360 dots per inch quality
- Multipurpose tray holds up to 100 sheets of paper and 15 envelopes
- Comes with 39 scalable TrueType® fonts
- GreyShare™ driver software for gray-scale printing
- All Macintosh products are designed to work together

#1758221  
**\$299**

## Apple® Color Printer

The Apple Color Printer delivers superior print resolution, speed, and color matching on a wide range of paper sizes and types—including 11 X 17-inch paper. With the Apple Color Printer, colors in your documents look the same on the page as they did on the scanned image. That's because the Apple Color Printer is integrated with ColorSync, Apple's unique color-matching software. And at 360 dots-per-inch (dpi) print resolution, the Apple Color Printer offers 44 percent higher resolution than traditional 300-dpi printers.

#1760318  
**\$1499**

## Apple® Portable StyleWriter® Printer



The Apple® Portable StyleWriter® printer goes anywhere and everywhere with Apple Macintosh® and PowerBook™ computers. It delivers high-resolution output, and versatile paper handling, all with smooth, quiet performance. And it even fits inside a briefcase. The Portable StyleWriter weighs only 4.5 pounds, and works with any PowerBook, Apple PowerBook Duo™, or Macintosh computer, using a rechargeable battery or a standard power source. It can print in a horizontal or vertical position, so you can use it in even the most confined spaces, whether you need to print on letterhead, envelopes, labels, or transparencies.

#1820443  
**\$399**

## Apple® Personal LaserWriter® NTR



The Apple® Personal LaserWriter® NTR printer offers you exceptional value in a compact laser printer. It uses a high-speed RISC processor for faster printing speed and very fast first-page output. It offers high-performance PostScript™ Level 2 capabilities that allow you to produce high-quality graphics and text, and give you access to hundreds of fonts from both Apple and third-party vendors. And its ability to connect simultaneously to Macintosh® and IBM PC (or compatible) computers or networks makes it an excellent choice for small workgroups in multivendor computing environments. Printer card & toner.

#1714351  
**\$989**

## Apple® LaserWriter® Pro 630

The Apple® LaserWriter® Pro 630 printer is perfect for individuals or groups who need the ability to print many pages per day, or complex graphics. The LaserWriter Pro 630 is one of Apple's highest-performance printers, printing at eight pages per minute 600 dpi resolution and an 8MB memory, expandable to 32MB make this a fast and versatile printer. It supports TrueType™, Adobe® PostScript™ Level 2, and PCL 4-fonts. Plus, it takes advantage of Apple's PhotoGrade™ technology and comes with 64 scalable fonts.

#1757965  
**\$2299**

## Apple® LaserWriter® Select 300



The Apple® LaserWriter® Select 300 provides lesser printing with high-quality results, an expansion path to PostScript, printer sharing from multiple Macintosh computers, and extensive paper-handling capabilities.

- 300 dpi • 5 pages per minute
- 512K RAM expandable to 4.5MB RAM • Supported Languages: Adobe PostScript (makes use of Apple QuickDraw; PostScript supports available optional upgrades) • 38 scalable TrueType fonts • High-speed RS-422 serial interface • Paper tray size: 250 sheets or 15 envelopes • Networking: Printer sharing through GreyShare software.

#1767773  
**\$749**

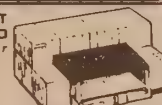
## HEWLETT PACKARD Authorized Dealer DeskWriter Inkjet Printer



**LASER QUALITY FOR THE MAC**  
300 DPI • Variety of Fonts & Font Sizes  
AppleLink Interface • Whisper Quiet!  
#1502837

**\$279**

## HEWLETT PACKARD Authorized Dealer DeskWriter C Color InkJet Printer



**COLOR INKJET OUTPUT AT 300 DPI!**  
Prints in Color or Black and White  
AppleLink Interface • 100 Sheet Paper Feeder  
Whisper Quiet • 3 Year Warranty  
#1816668

**\$399<sup>99</sup>**

## HEWLETT PACKARD Authorized Dealer DeskWriter 550C Color InkJet Printer



**COLOR INKJET OUTPUT AT 300 DPI!**  
Prints in Color or Black and White at the same time.  
LocalTalk Interface • 100 Sheet Paper Feeder  
Whisper Quiet • 3 Year Warranty  
35 Scalable fonts • Built-in spooler  
#1733699

**\$569**

## HEWLETT PACKARD Authorized Dealer DeskJet 1200C



• 800 x 300dpi black text at up to 7 pages per minute produces high-quality output at business speed.  
• 300dpi color at 1 to 2 minutes per page creates fast, high quality output with bold, brilliant colors and true black  
• Plan-paper printing for both black and color saves money and allows convenient use of common office paper stationery  
• Built-in high-speed Centronics interface and optional HP JetDirect cards provide powerful, flexible connectivity  
• Both Macintosh and DOS environment  
#1786865

**\$1999**

## HEWLETT PACKARD Authorized Dealer LaserJet 4M



Fast 8ppm printing for complex documents  
PostScript™ on SIMM/PCLS  
5MB RAM  
600 DPI Print Quality at a 300 DPI Price  
300 Page Paper Capacity • Local talk  
Serial/Parallel • Works equally well with PC's or MAC's

#1734151  
**\$1899**

## HEWLETT PACKARD Authorized Dealer LaserJet 4SiMX



Expandable and flexible, excellent for networks. Fastest HP LaserJet printer at 17 pages per minute. Multiple language capability with auto switching. True 600 x 600 dpi printing with RET and microfine toner. 75,000 page/month duty cycle and flexible paper-handling with HP quality and reliability. #1779608

**\$4299**

## HEWLETT PACKARD Authorized Dealer LaserJet 4ML



**For Macintosh**

- 26 built-in scalable typefaces let you shrink and enlarge type to thousands of sizes.
- 300 DPI Laser printing with HP Resolution Enhancement technology and microfine toner for smooth, sharp text and graphics.
- 1MB standard memory with Memory Enhancement technology effectively doubles your printer memory.

#1803716  
**\$999**

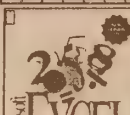
## Japanese Language Kit



Japanese Language Kit contains everything you need to use Japanese on your computer. If you can read and write Japanese, you can use this kit to easily create, edit and print documents that contain Japanese characters.

MAC  
#1811968  
**\$219**

## Microsoft Excel 4.0 For Mac



MS Excel leads the Macintosh spreadsheet market in ease of use, design innovation, and integration. New features of 4.0 include: Drag & Drop Customizable Toolbars Auto Fill/Auto Fit • Auto Select Shortcut Menus View manager and a lot more.

MAC  
#1705500  
**\$288**

## After Dark



After Dark provides over 30 different displays to prevent screen burn-in. You can choose any style including lightning bolts, abstract art, crawling worms, a jump-to-light-speed or a basic dimmer.

BERKELEY SYSTEMS  
MAC  
#1484050  
**\$27<sup>95</sup>**

## Spectrum HoloByte IRON HELIX CD-ROM



Iron Helix is a science fiction thriller that immerses you in a great paced virtual reality filled with danger and intrigue. Control a robot probe or navigate through dozens of corridors and rooms. This CD action adventure game looks and feels more like a movie than a game.

MAC  
#1801471  
**\$54<sup>95</sup>**

## My Advanced Label Designer



With my Advanced Label Designer, you can choose from over 100 pin-fed or laser label formats or design your own in any size! You'll create great looking labels, shipping labels, price tags, video/audio cassette labels and a lot more.

MAC  
#1704532  
**\$36<sup>95</sup>**

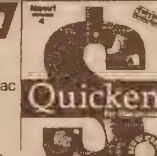
## HELL CAB



A journey in the devil's time machine. Ride through history's most infamous periods. Combines live characters with video, lifelike sounds effects and rich, 3-D graphics.

MAC  
#1812121  
**\$69<sup>95</sup>**

## Quicken VERSION 4.0 FOR MAC



Quicken 4.0 for Mac is the fastest, easiest way to organize personal and small business finances. This award winning and best selling finance software includes:

- Investment Tracking
- Loan Amortization
- Tax Schedule reports and links
- Over 100 New Features

#1798072  
**\$46<sup>95</sup>**

Home of Fast, Friendly,  
Courteous Service

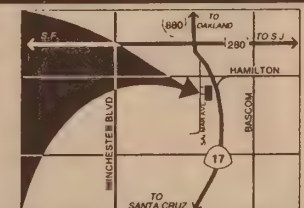
# TELETRONICS TRY'S

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790





Authorized Reseller

# Apple® Macintosh® Computers and Accessories



Authorized Reseller

## ASANIE FRIENDLY NET ADAPTER

10 WORD IN QUADRA ETHER  
TO 10 BASE T  
#1729175

**\$79<sup>99</sup>**

## FARALLON APPLETALK CONNECTOR

Apple MAC phone connector  
DIN 8  
PN/350  
#1743979

**\$19<sup>99</sup>**

## PIANO TEACHING SYSTEM

First piano that teaches you how to play it! Enjoy video games while mastering basic piano techniques. Customizes individual learning with creative, interactive software.  
#1678019

**\$369**

## 14,400 BPS MODEM/9600 BPS FAX FOR THE MACINTOSH® POWERBOOK™

PowerPort/Gold offers the highest performance of any fax/modem available for the Macintosh PowerBook. If you are an intensive user of remote network dial-in software, such as AppleTalk Remote Access (ARA), or if you routinely perform time-critical modem transfers, PowerPort/Gold is the only choice for you. Using ARA over a telephone line, you can access a file server or files on your desktop computer, check your E-mail, utilize a remote printer, just as if you were at the office and connected to an AppleTalk network. With PowerPort/Gold and ARA, you are never out of touch with important news, information, or documents. PowerPort/Gold lets you send and receive faxes at 9600 bps. With a data transfer rate of 14,400 bps, PowerPort/Gold provides the highest performance available for use with on-line services or for use with AppleTalk Remote Access.  
#1735613

**\$399<sup>99</sup>**

## 9600 BPS MODEM/ 9600 BPS FAX FOR THE MACINTOSH® POWERBOOK™

PowerPort/Silver is the best price/performance send and receive fax and data modem for your Macintosh PowerBook. If you send and receive faxes, communicate on-line, and are a moderate to heavy user of remote network dial-in software such as AppleTalk Remote Access (ARA), PowerPort/Silver is the product for you. Using ARA over a telephone line, you can access a file server or files on your desktop computer, check your E-mail, utilize a remote printer, just as if you were at the office and connected to an AppleTalk network. With PowerPort/Silver and ARA, you are never out of touch with important news, information, or documents. PowerPort/Silver lets you send and receive faxes at 9600 bps. With a data transfer rate of 9600 bps, PowerPort/Silver provides the best price performance for use with on-line services or for use with AppleTalk Remote Access.  
#1735624

**\$369**

## HOME OFFICE

14,400B MODEM 9600 FAX  
S/R VOICE MAIL  
PMD-50M • Mini Size  
Software Included  
Built-in line Switcher  
#1757622

**\$379<sup>99</sup>**

## Robotics MAC & FAX® 14,400 BAUD EXTERNAL FAX/MODEM

A combination fax and modem designed for use with the Macintosh. Send and receive Group III fax transmissions. Supports data speeds from 300 to 14,400 and fax speeds from 2400 to 14,400. Fully CCITT V.32 bis and CCITT V.29 compatible. Includes V.42/MNP 2-4 error control and V.42 bis/MNP 5 data compression for throughput of up to 57,600 bps.  
#1759923

**\$209**

## GRAVIS MOUSE STICK MAC

• 3 Fire Buttons  
• Adjustable Tension Controls  
#1440168

**\$59<sup>99</sup>**

## COACTIVE CONNECTOR MAC

Coactive Connector Macintosh Version  
File Sharing  
Print Sharing  
Plug and Go Parallel Net Solution  
#1818622

**\$39<sup>99</sup>**

## MASS microsystems 210MB MAC EXTERNAL 2" HARD DRIVE

210MB EXTERNAL FOR MAC  
15MS ACCESS  
DD120P2 #1777927

**\$499**

## MASS microsystems FLOPTICAL 21 MAC

21MB FLOPTICAL DRIVE  
FOR MAC 80MS  
FP21  
#1777983

**\$379**

## SCANMAN 32 MAC

100-400 DPI Resolution  
32 Shades of Grey  
Includes Digital Darkroom  
#1442528

**\$249**

## PAGE MAC-CARRY SE CARRYING CASE

The Mac-Carry SE case features a locking accessory pocket to help protect your valuable disks and a fully padded exterior keyboard pocket. The padded Mouse House fits comfortably in the lid. A high-density foam spacer allows you to carry an extra disk drive. (10.5" wide x 11" deep x 18" high)  
COM 100 #1798636

**\$69<sup>95</sup>**

## PICEON A Dynatech Company PICEON FAX/MODEM FOR THE APPLE POWERBOOK

PICEON's Dispatcher 14,400 data fax/modem, the most powerful by any manufacturer for the Apple PowerBook, is an intelligent, microprocessor-controlled communications device that operates at 300-14,400 bps in data mode and 2,400-14,400 bps in fax mode. With V.42 bis, MNP 5, MNP 10 and Group III fax capability, you simply cannot buy a better modem for any computer at any price. PICEON's modems are FCC and DOC approved, operate in full duplex over the telephone network and comply with CCITT and EIA recommendations.  
#1793860

**\$269**

## MACLINK MAC PC PLUS/PC

MacLink Plus/PC is a complete, easy-to-use kit for exchanging files in either direction between a Macintosh and a PC, PS2, Laptop, PTO, Sun, or NeXT Computers.  
#82673

**\$129<sup>95</sup>**

## PEACHTREE ACCOUNTING FOR MAC

For Small Business  
Accounting Ease

An integrated accounting package featuring General Ledger, Accounts Receivable, Accounts Payable, Payroll, Inventory, Job Costing, Bank Reconciliation and Purchase Order. Features On-Line help and interactive tutorial for ease of use.

**\$119<sup>95</sup>**

## STAR TREK 25TH ANNIVERSARY FOR MAC

Combines a realistic 3-D space flight simulator with a wide variety of role-playing adventures to create a gripping game of galactic exploration. Blast through thousands of state-of-the-art, 3D digitized space action scenes. Scan and survey hundreds of fractally generated worlds.

**\$34<sup>95</sup>**

## MATH BLASTER Plus! For Mac

New Math Blaster Plus rockets into a new dimension with cosmic new activities and graphics, including an arcade style game which is out of this world. It covers addition, subtraction, multiplication, division, fractions, decimals, percents and teaches over 750 math facts and problem solving skills.

**\$36<sup>95</sup>**

## Microsoft OFFICE 3.0 for Windows

MS Office is all that you need for your office. Four top applications in one box.  
MS Excel, MS Word, MS Power Point and MS Mail. #1699452

**\$469**

## STACKER

Stacker - the award winning disc compression software is now available for the Mac. It doubles the capacity of your hard disk, and it is 100% compatible with all applications.

**\$99<sup>95</sup>**

Home of Fast, Friendly,  
Courteous Service

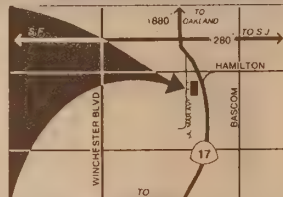
# fray's ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

HOURS:  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



SUNNYVALE  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

FREMONT  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

PALO ALTO  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790



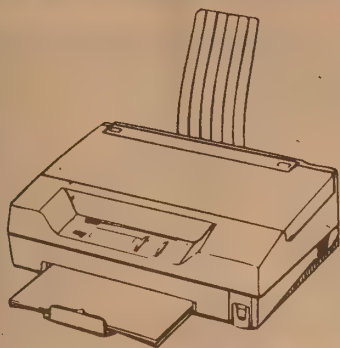
# EPSON®

WHEN YOU'VE GOT AN EPSON  
YOU'VE GOT A LOT OF COMPANY

EPSON'S NEW **SCALABLE** FONT DOT MATRIX PRINTERS  
HAVE BEEN WILDLY SUCCESSFUL - AND FRY'S™ HAS THEM!

EPSON Roman and San Serif-SCALABLE From 8 To 32 Points  
9 Resident Bit-Mapped Fonts As Well As Top, Rear, Bottom and  
Front Paper Feed Paths • Automatic Single Sheet and Continuous Form  
Convertible Push/Pull Tractor • True 360 X 360 DPI Resolution for  
Professional Quality Graphics • 2 Year Warranty

EPSON® *ActionPrinter™* 3250

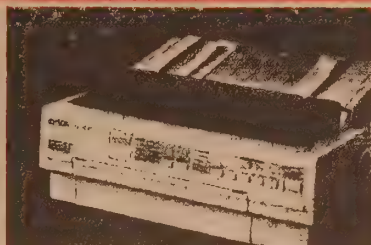


## 24 PIN PRINTER

50 Sheet Paper Cassette Tray • Quiet  
ESC/P2 Control Language • Simple  
Control Panel • Two Year Warranty

# \$179

AP-3250  
#1667299



## LQ-570+

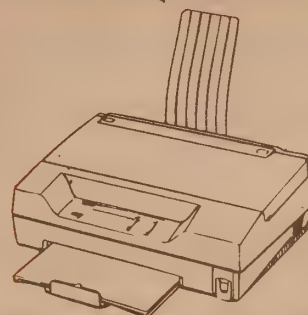
## 24 PIN PRINTER

w/ **SCALABLE FONTS!**

80 Column • 337 CPS Draft Mode  
112 CPS Letter Quality • Four Scalable Fonts  
360 dpi with Optional Film Ribbon  
#1612004

# \$239

EPSON® *ActionPrinter™* 2250



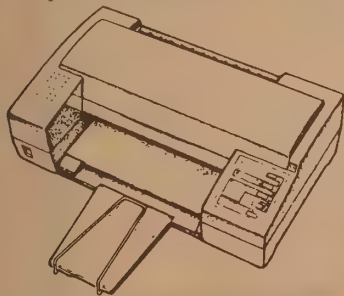
## 9 PIN IMPACT

**DOT MATRIX PRINTER**

50 Sheet Paper Cassette Tray  
240 CPS Draft, 48 CPS NLQ  
Quiet • 2 Year Warranty  
#1729120

# \$127<sup>95</sup>

EPSON  
*Stylus™ 800*  
INK JET PRINTER

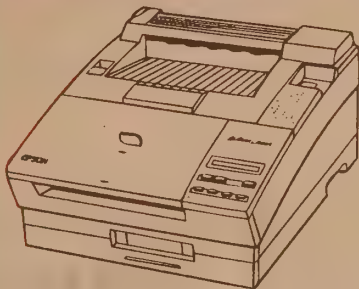


EPSON C106001  
Stylus 800 Ink Jet Printer  
(2 year warranty)  
360 X 360 DPI "Laser-Sharp" printing  
ESC/P2 LQ 7 Type Face with 4 Scalable  
Fonts  
#1782785

\*After \$50  
manufacture  
rebate. In  
store cost  
\$339

# \$289\*

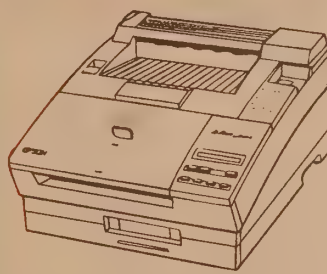
EPSON® *ActionLaser™* 1000



Fast six pages per minute print speed  
makes you more productive. HP  
LaserJet IIP and Epson dot matrix  
compatible. 14 resident fonts.  
512KB memory expandable to  
6.5MB on motherboard. 6000-page  
single element imaging cartridge.  
Optional Adobe Postscript. Two year  
limited warranty. #1760237

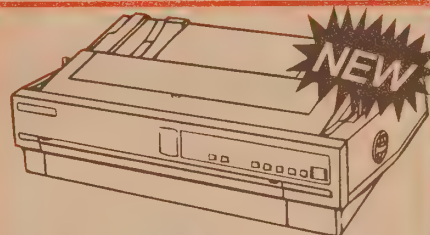
# \$629

EPSON® *ActionLaser™* 1500



- Fast six pages per minute print speed.
- 300 X 300 dpi resolution with MicroArt  
printing and RITech technology.
- 14 resident fonts, 13 scalable to any  
size.
- LaserJet™ III and Epson dot matrix  
compatible.
- 1MB memory expandable to 5MB on  
motherboard #1798706

# \$688



## LQ-1070+ 24-PIN PRINTER

136 Column • 11 Fonts  
4 Scalable Fonts • 315 CPS Draft Mode  
105 CPS  
NLQ Mode #1821927

# \$399

**Service EPSON®** Extra Care Certificate  
for 1 year extended warranty service

9-Pin Printer **\$39<sup>95</sup>** 24-Pin Printer **\$59<sup>95</sup>**

Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



VISA AND  
MASTERCARD

**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790



# WE'LL BEAT ANY IBM PRICE IN TOWN WE GUARANTEE IT!!!



## IBM® PS/1® **AT BUS**

Expert 2133-S55

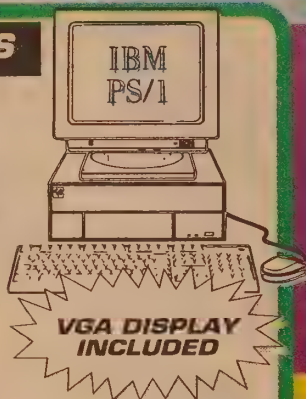
**486SX-33MHz**  
**170MB VGA SYSTEM**

Intel 486SX 33MHz CPU  
170MB Hard Drive  
4MB Memory Expandable to 32MB  
3.5" 1.44MB/5.25" 1.2MB Floppy Drives  
5 AT Slots • 14" SVGA Color Monitor  
IBM Mouse • IBM Keyboard • Internal Modem  
Novell® certified

**Preloaded Software:** MS DOS 6.0 • Microsoft Windows 3.1  
Microsoft Works for Windows • PRODIGY • P/S1 Tutorial, Index  
Fitness, • Virus check • PS/1 Edition American On-line

**IBM Quality & Reliability:** The PS/1 Expert is built to  
IBM's exacting standards for quality & reliability.

**Support and Service:** The exclusive online PS/1 Club™ answers your computing  
questions, 24 hours a day, 365 days a year.  
#1767290



**\$1799**



## IBM® PS/1® **AT BUS**

Expert 2155-S70

**486DX-33MHz**  
**170MB SVGA SYSTEM**

Intel 486DX 33MHz CPU • 170MB Hard Drive  
4MB Memory Expandable to 64MB • 128K Cache  
3.5" 1.44MB/5.25" 1.2MB Floppy Drives  
5 AT Slots • 14" SVGA Color Monitor • Local Bus SVGA  
IBM Mouse • IBM Keyboard • Fax/Modem  
Novell® certified

**Preloaded Software:** MS DOS 6.0 • Microsoft Windows 3.1  
Microsoft Works for Windows • PRODIGY • P/S1 Tutorial, Index  
Fitness, • Virus check • PS/1 Edition American On-line

**IBM Quality & Reliability:** The PS/1 Expert is built to  
IBM's exacting standards for quality & reliability.

**Support and Service:** The exclusive online PS/1 Club™  
answers your computing questions, 24 hours a day, 365 days a year.  
#1767304



**\$1999**



## IBM® PS/1® **AT BUS**

Expert 2155-S80

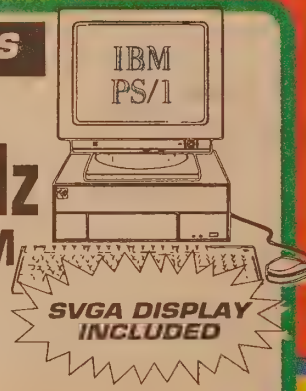
**486DX2-50MHz**  
**250MB SVGA SYSTEM**

Intel 486DX2 50MHz CPU  
250MB Hard Drive • 128K Cache  
4MB Memory Expandable to 64MB  
3.5" 1.44MB/5.25" 1.2MB Floppy Drives  
14" SVGA Color Monitor • Local Bus SVGA  
IBM Mouse • IBM Keyboard • Internal Fax/Modem  
5 AT Slots • Novell® certified

**Preloaded Software:** MS DOS 6.0 • Microsoft Windows 3.1  
Microsoft Works for Windows • PRODIGY • P/S1 Tutorial, Index  
Fitness, • Virus check • PS/1 Edition American On-line

**IBM Quality & Reliability:** The PS/1 Expert is built to  
IBM's exacting standards for quality & reliability.

**Support and Service:** The exclusive online PS/1 Club™ answers your computing questions,  
24 hours a day, 365 days a year.  
#1767315



**\$2399**



## IBM® PS/1® **AT BUS**

Expert 2155-S85

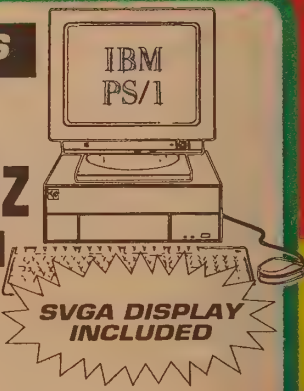
**486DX2-66MHz**  
**250MB SVGA SYSTEM**

Intel 486DX2 66MHz CPU • 250MB Hard Drive  
8MB Memory Expandable to 64MB • 128K Cache  
3.5" 1.44MB/5.25" 1.2MB Floppy Drives  
5 AT Slots • 14" SVGA Color Monitor • Local Bus SVGA  
IBM Mouse • IBM Keyboard • 2400 BPS Modem  
Novell® certified

**Preloaded Software:** MS DOS 6.0 • Microsoft Windows 3.1 Microsoft Works for  
Windows • PRODIGY • P/S1 Tutorial, Index Fitness, • Virus check • PS/1 Edition  
American On-line

**IBM Quality & Reliability:** The PS/1 Expert is built to  
IBM's exacting standards for quality & reliability.

**Support and Service:** The exclusive online PS/1 Club™  
answers your computing questions, 24 hours a day, 365 days a year.  
#1767326



**\$2799**



Home of Fast, Friendly,  
Courteous Service

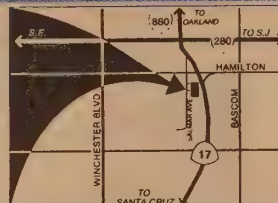
# Fry's ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# MODEMS

## INTERNAL DATA/FAX MODEM DATA PORT™ 14.4/FAX

### All-in-one high-speed V.32bis Fax/Modem

Delivers the highest performance, reliability, and compatibility in the industry. Tested, proven the leader in connecting calls, even on noisy, impaired lines.

The DataPort 14.4/Fax Modem delivers data at line speeds up to 14,400 bps. That's fast! But combined with its advanced, optically-coupled phone line interface and V.42bis data compression and error correction, you gain effective data throughput of up to 57,600 bps—nearly 24 times faster than 2,400 bps modems—on "real world" phone lines! This high performance significantly saves long distance costs.

The DataPort 14.4/Fax Modem expands your personal computer into a fax workstation. You can send and receive faxes without ever waiting in line; and send presentation-quality faxes!  
#1751420



# \$249



## EXTERNAL DATA/FAX MODEM DATA PORT™ 14.4/FAX

### All-in-one high-speed V.32bis fax modem

Delivers the highest performance, reliability, and compatibility in the industry. Tested and proven to be the leader in connecting calls, even on noisy, impaired lines.

The DataPort 14.4/Fax Modem delivers data at line speeds up to 14,400 bps. That's fast! But combined with its advanced, optically-coupled phone line interface and V.42bis data compression and error correction, you gain effective data throughput of up to 57,600 bps—nearly 24 times faster than 2,400 bps modems—on "real world" phone lines! This high performance significantly saves long distance costs.

The DataPort 14.4/Fax Modem expands your personal computer into a fax workstation. You can send and receive faxes without ever waiting in line; and send presentation-quality faxes!  
#1751419



# \$279<sup>99</sup>



COMPUTER PERIPHERALS, INC.

## VIVA 14.4 EXTERNAL 14,400 BPS FAX/MODEM V.32 BIS

14,400 Baud  
Send/Receive  
Fax/Modem  
CPI 502402  
#1704646

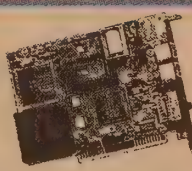


# \$189<sup>99</sup>

COMPUTER PERIPHERALS, INC.

## 14,400 BAUD INTERNAL FAX/MODEM

Internal 14,400 BPS Fax/Modem  
V.42 • Winfax Software  
#1729382

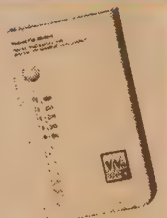


# \$159<sup>99</sup>

COMPUTER PERIPHERALS, INC.

## 2400/9600 FAX POCKET MODEM

2400B Modem  
9600B Pocket Size Fax • AC/DC  
CPI 504505  
VIVA 2496P  
#1704679



# \$99<sup>99</sup>

COMPUTER PERIPHERALS, INC.

## 14,400 BAUD POCKET FAX/MODEM

14.4/14.4 Pocket Fax/Modem  
57,600BPS MAX  
CPI 504107  
#1809664



# \$289

COMPUTER PERIPHERALS, INC.

## INTERNAL 9600BPS SEND 4800BPS RECEIVE FAX 2400 BPS MODEM

9600FAX SEND AND 4800 RECEIVE  
WITH 2400B DATA MODEM  
CPI 504504 #1704691



# \$49<sup>99</sup>

COMPUTER PERIPHERALS, INC.

## EXTERNAL 9600BPS SEND 4800BPS RECEIVE FAX 2400 BPS MODEM

504509 EX VIVA DATA FAX  
9600 SEND AND 4800 RECEIVE  
2400 MODEM  
#1733150



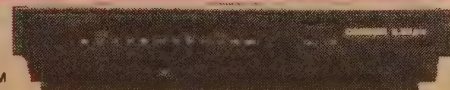
# \$74<sup>99</sup>

**Robotics**  
The Intelligent Choice in Data Communications

## COURIER™ 14,400 BAUD EXTERNAL HST DUAL STANDARD MODEM w/MNP1-5

US Robotics HST Dual  
Standard Modems  
14,400 Baud Courier  
V.32BIS, V.32, V.42,  
V.42BIS External  
US Robotics #000093-0  
#1639074

# \$799<sup>95</sup>



**Robotics**  
The Intelligent Choice in Data Communications

## COURIER™ 14,400 BAUD EXTERNAL MODEM w/MNP1-5

US Robotics 14,400 Baud  
Courier Modems  
V.32BIS, V.32, V.42, V.42BIS  
External MNP1-5  
US Robotics #000094-0  
#1639030

# \$499



Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

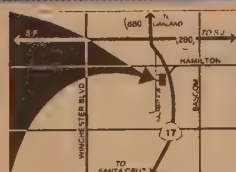
Prices Good Through  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

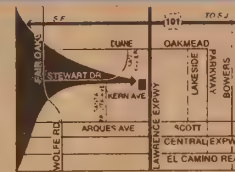
HOURS:  
MON-FRI  
9AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
VISA  
AND  
MASTERCARD  
ACCEPTED

CORPORATE P.O. FAX #'s



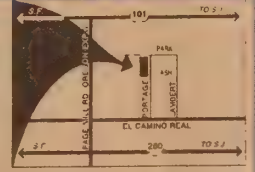
**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700

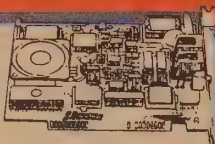


**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# MODEMS

**PRACTICAL PERIPHERALS**

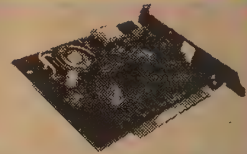


## 14,400 BAUD INTERNAL FAX/MODEM

14,400 Baud Modem/Fax  
Super High Speed V.32 BIS Protocol  
Quick Link II Communication Software  
PM14400FX #1667912

**\$209**

**PRACTICAL PERIPHERALS**

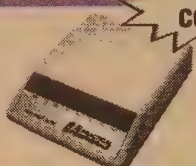


## PM2400F INTERNAL 2400 MODEM 9600 SEND & 4800 RECEIVE FAX

V.42 SOFTWARE QUICK LINK II  
#1741726

**\$69<sup>99</sup>**

**PRACTICAL PERIPHERALS**



## MINI EXTERNAL 2400 BAUD MODEM 9600 BAUD SEND & 4800 BAUD RECEIVE FAX

V.42 • Quick Link II Communication Software  
PM2400F #1741737

**\$89<sup>99</sup>**

**PRACTICAL PERIPHERALS**

**LIFETIME WARRANTY!**



## 2400 MODEM 9600 SEND/4800 RECEIVE POCKET FAX

V.42 BIS SOFTWARE QUICK  
LINK WITH BATTERY #1741748



**\$119**

**PRACTICAL PERIPHERALS**



## 9600 BAUD FAX 9600 BAUD MODEM

V.32 V.42 V.42 BIS • QUICK LINK 11  
#1757770

**\$199**

**PRACTICAL PERIPHERALS**

**LIFETIME WARRANTY!**



## 14,400 MODEM 14,400 FAX

V.32, V.42 BIS MINI TOWER MODEM  
14,400 DATA AND FAX  
QUICK LINK II SOFTWARE  
LIFETIME WARRANTY #1757781



**\$229**

## FaxMe

**PRACTICAL PERIPHERALS**



**100% HAYES  
COMPATIBLE**



Introducing the plug-in cartridge that turns  
an HP LaserJet printer into a  
plain paper receive FAX machine.

FaxMe turns your HP printer into a receive  
only fax machine. It is compatible with all  
Group III fax machines and will receive at  
9,600, 4,800, or 2400 BPS. FaxMe runs  
without software and without a computer.  
Lifetime Warranty.  
#1741771

**\$139<sup>99</sup>**

**PRACTICAL PERIPHERALS**



## 14,400 BAUD POCKET FAX/MODEM

POCKET MODEM QUICK LINK  
BATTERY PACK AND CASE  
#1750430



**\$399**

## Intel Internal Faxmodem 24/96i

200 bps Modem 9600 bps Fax

Make all the right connections. Intel connects you to the broadest range  
of modems and fax machines. Plus Intel gets you started with \$107  
worth of free on-line services. Put a new world of information at your  
fingertips. Pay bills electronically. Get the latest stock market report.  
All necessary communication and fax software is included as well as  
industry leading Intel technical support by phone. 24 hour fax and  
electronic bulletin board services.  
#1805800



**\$69<sup>99</sup>**

## Intel External Faxmodem 14.4/14.4e

14,400 bps, V.42bis  
Modem/14,400 bps Fax

Make all the right connections. Intel connects you to the broadest range  
of modems and fax machines. Plus Intel gets you started with \$107  
worth of free on-line services. Put a new world of information at your  
fingertips. Pay bills electronically. Get the latest stock market report. All  
necessary communication and fax software is included as well as industry  
leading Intel technical support by phone. 24 hour fax and  
electronic bulletin board services.  
#1805811



**\$189**

## Intel Internal Fax/Modem 144/144i

14,400 bps, V.42bis  
Modem/14,400 bps Fax

Intel gets you started with \$107 worth of free on-line services.  
Pay bills electronically. Get the latest stock market report. All  
necessary communication and fax software is included as well as  
industry leading Intel technical support by phone. 24 hour fax and  
electronic bulletin board services.  
#1805822



**\$169<sup>99</sup>**

Home of Fast, Friendly,  
Courteous Service

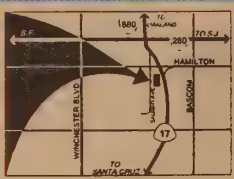
# FRY'S

Prices Good Through  
October 11, 1993

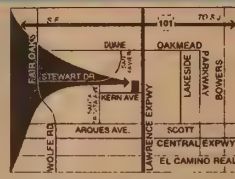
**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA VISA AND  
MASTERCARD  
ACCEPTED

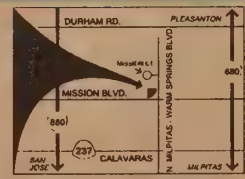
CORPORATE P.O. FAX #'s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# MONITORS

**HANA**

14 + 1

1024 X 768

.28 DOT PITCH

NON-INTERLACED

SVGA MONITOR

EQUIVALENT TO 15"

SIZE

1024 X 768

256 X 185

Display Area

72Hz Refresh

#1804234



**\$349<sup>95</sup>**

**NEC 3FGE**

1024 X 768

NON-INTERLACED

14" VGA ANALOG

FLAT SCREEN

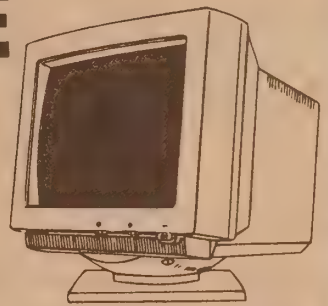
MONITOR

1024 X 768 • Analog

Flat Screen

Non-Interlaced

3FGE #1788091



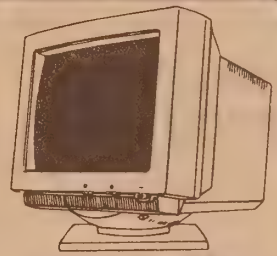
**\$599**

**NEC 4FGE**

1024 X 768 NON-INTERLACED

15" SUPER VGA MONITOR

1024 X 768 Non-Interlaced Flat Screen Monitor  
4FGE #1641459



**\$749**

**SONY.**

1024 x 768

NON-INTERLACED

14" SVGA

MONITOR

1024 X 768 72HZ

Non-Interlaced

Microprocessor

Control

Model 1430

#1756388



**\$599**

**SAMPO**

A M E R I C A

1024 X 768

NON-INTERLACED

15" SUPER

VGA MONITOR

1024 X 768 • Non-Interlaced

Flat Screen

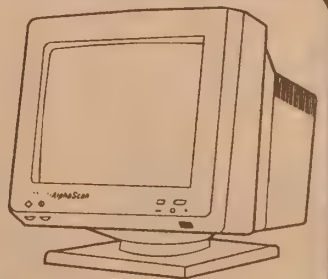
INVAR Shadow Mask

70HZ Refresh VESA

15" Large Screen

SAMPO KDM-1566

#1691742



**\$499**

**Fry's** Home of Fast, Friendly,  
Courteous Service  
**ELECTRONICS**  
Prices good thru  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
**VISA AND  
MASTERCARD**



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# MAC HARD DRIVES

## MASS EXTERNAL 210MB HARD DRIVE

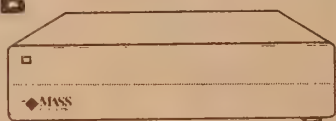
210MB EXTERNAL HARD DRIVE FOR MAC  
15MS ACCESS  
DD210 #1777905



**\$399<sup>99</sup>**

## MASS EXTERNAL 120MB HARD DRIVE

120MB EXTERNAL HARD DRIVE FOR MAC  
15MS ACCESS  
DD120 #1777891



**\$399**

## 210MB MAC EXTERNAL 2" HARD DRIVE

210MB EXTERNAL FOR MAC  
15MS ACCESS  
DD120P2 #1777927



**\$499**

## MASS MICRO EXTERNAL 120MB 2"

120MB EXTERNAL FOR MAC  
15MS ACCESS • 2 X 4 . 7 X 7.9  
Some Macs may require external power supply.  
DD120P2 #1777916



**\$299**

## IOMEGA MAC TRANSPORTABLE BERNOULLI 90

- 18-msec effective access time
- Rugged Bernoulli Technology
- The right disk for the right job
- Reads and writes 90MB Bernoulli Disks, reads 44MB Bernoulli Disks

#1765070

**IOMEGA**

**\$499**

## MASS FLOPTICAL 21 MAC

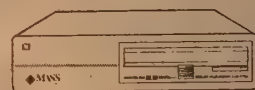
21MB FLOPTICAL DRIVE FOR MAC 80MS  
FP21  
#1777983



**\$379**

## MASS EXTERNAL SYQUEST 105 MAC

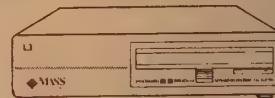
105MB EXTERNAL SYQUEST FOR MACINTOSH  
14.5MS ACCESS W/ SOFTWARE CARTRIDGE  
DP105 #1796704



**\$799**

## MASS EXTERNAL SYQUEST 44 MAC

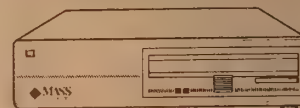
44MB EXTERNAL SYQUEST FOR MACINTOSH  
20MS ACCESS W/ SOFTWARE  
DD01P #1777938



**\$479**

## MASS EXTERNAL SYQUEST 88 MAC

R/R 44 AND 88MB CARTRIDGE  
20MSEC ACCESS W/SOFTWARE  
DP88CO1 #1796748



**\$549**

## BERNOULLI MULTIDISK™ 150

- 150MB (300MB with included compression)
- 18-msec effective access time
- Rugged Bernoulli Technology
- The right disk for the right job
- Reads and writes 90MB Bernoulli Disks, reads 44MB Bernoulli Disks

#1765058



Handles like a floppy, performs like a hard disk

**IOMEGA**

**\$599**

Home of Fast, Friendly,  
Courteous Service

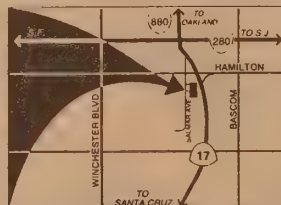
# fry's ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

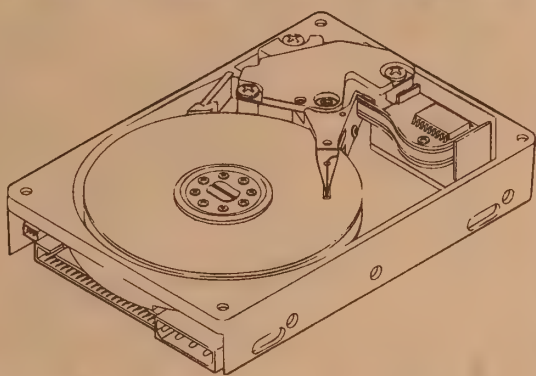
**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# SCSI HARD DRIVES

## Quantum™ 240MB SCSI HARD DRIVE

Fast Access  
256K Cache  
#1758472



# \$249

## Maxtor 345MB SCSI HARD DRIVE

3.5" X 1" HT.  
14msec Access  
7345S  
#1807673



# \$388

**Fry's** Home of Fast, Friendly,  
Courteous Service  
**ELECTRONICS**  
Prices good thru  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
**VISA AND  
MASTERCARD**



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**  
600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# HARD DRIVES

## Maxtor 213MB 3.5" IDE HARD DRIVE

3.5" X 1" HT.  
15MS Access Time  
7213A  
#1694044



# \$189

## CONNER 250MB 3.5" IDE HARD DRIVE

12ms Average Access  
1" HT.  
3.5" Form Factor  
CP30254  
#1795356



# \$219

Home of Fast, Friendly,  
Courteous Service

# Fry's

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**  
600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# HARD DRIVES

**Quantum™**

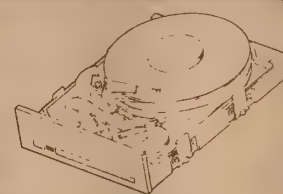


**240MB IDE  
HARD DRIVE**

256K CACHE • FAST ACCESS #1758449

**\$225**

**Seagate**



**42MB IDE  
HARD DRIVE**

1" Drive 42MB • 28ms Access  
ST-351A-X#1647215

**\$119<sup>95</sup>**

**SAMSUNG**

**120MB 3.5" IDE  
HARD DRIVE**

3.5" Form Factor 1" Ht.  
16ms Average Access Time  
SHD3062A #1708695



**\$158**

**WESTERN DIGITAL**

**340MB  
3.5" IDE  
HARD DRIVE**



3.5" Size • 12 msec Average Access • AC2340 #1771644

**\$294**

Home of Fast, Friendly,  
Courteous Service

**fray's** ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**  
600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



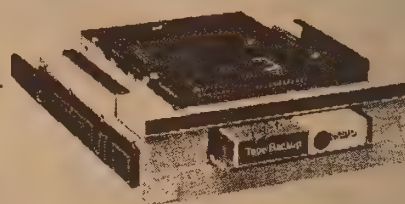
# BACK-UP DRIVES

## CONNER 250MB INTERNAL TAPE BACK-UP

WITH DC12120 TAPE CARTRIDGE • C250MGT #1825747

# \$148

COLORADO  
MEMORY SYSTEMS INC.

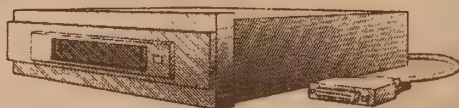


## 250MB TAPE BACK-UP

40/80/120/250 MB Format • Internal Drive runs off floppy controller  
Uses DC-2000 Tapes Model DJ-20 #1610068

# \$178

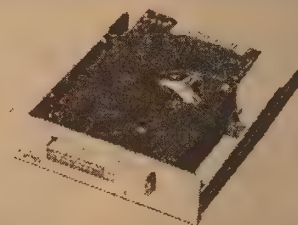
## IBM 250MB 3.5" TAPE BACK-UP



3.5" Form Factor runs standard QIC 80 Software  
TD630 #1780174

# \$259<sup>95</sup>

## SUMMIT<sup>TM</sup> MEMORY SYSTEMS INC. 250MB TAPE BACK-UP



250MB Internal Tape Backup Runs off of Floppy Controller • Central Point Software For Windows & DOS  
2 Year Warranty Model SE250 #1635586

# \$199<sup>95</sup>

**Fry's** ELECTRONICS  
Home of Fast, Friendly,  
Courteous Service  
Prices good thru  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# CD-ROM

**HITACHI**

## HEAVY DUTY DOUBLE SPEED INTERNAL CD-ROM

TRIPLE SAFEGUARD PROTECTION: Double Door  
Automatic Lens Cleaning • Sealed Chassis  
260ms Access Time • 128KB Buffer  
MPC, XA, Kodak Multi-session Photo CD Compatible  
#1810347

2 YEAR  
PARTS &  
LABOR  
WARRANTY

**\$489**

## TEAC DUAL-SPEED INTERNAL CD-ROM

256ms Dual Speed • 335KB Through-put  
#1815087

**\$379**

## MULTI-SPEED MEGA SAVINGS! NEC INTERNAL CD-ROM

Dual spin drive optimizes  
speed by accessing video  
and sound at their different routes.  
280ms average access time.  
350KB transfer rate.  
CDR84-1  
#1785582

**\$449**

## TOSHIBA DUAL SPEED INTERNAL CD-ROM

SCSI CD-ROM • 200ms Access • 256K Cache  
330KB/sec Transfer Rate • Multi-Speed  
#1785618

**\$419**

## OMNI CD MULTIMEDIA UPGRADE KIT

• 300 KB/sec data transfer rate • Multi-session photo CD compatible  
• 320ms access rate • 680MB data capacity  
• 64KB RAM buffer • Daisy-chain up to four Creative Labs drives  
• CD-ROM XA ready  
#1825714

CREATIVE  
CREATIVE LABS, INC.



**\$339<sup>95</sup>**

## SONY INTERNAL CD-ROM

64KB BUFFER  
550ms Access  
150KB Transfer Rate  
Tray Load • No Caddy Required  
#1812925

**\$159**

REVEAL

## INTERNAL CD-ROM KIT

Internal CD-ROM  
390ms Average AccessTime  
Includes Interface, Drivers & Cables  
#1796508

Includes  
Free  
Installation  
Video

**\$189**

REVEAL

## INTERNAL CD-ROM DRIVE

With its high-speed design and precision optics, Reveal's CD110 internal CD-ROM drive gives you full access to today's most advanced multi-media programs. Including ones for education, entertainment, business management and health, with state-of-the-art effects such as action video clips, lively 3-D animations, brilliant color photographs and more. And with the CD110's fast 350ms data access time and 150KB data transfer rate, your programs will move along smoothly and quickly. You can also use the drive to play your favorite CDs while you work, or even to view your own photographs, because the CD110 is multi-session Photo-CD ready! Just have your pictures placed on CD by your local Kodak processing center. Includes controller card, cables, how-to video and instruction booklet.  
CD110  
#1811407

**\$279<sup>99</sup>**

## MICROSOLUTION MOBILE MEDIA

## BACKPAK EXTERNAL CD-ROM NO INTERFACE REQUIRED

External Portable CD-ROM Connects To Parallel Port  
150KB Transfer Rate  
#1798728

**\$369**

Home of Fast, Friendly,  
Courteous Service

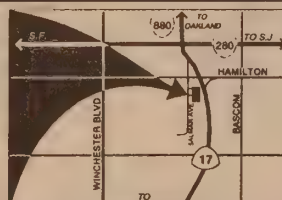
# fry's ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA  
MASTERCARD  
VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790



# YOUR BEST BUYS ARE ALWAYS AT FRY'S!

## maxell DATA STORAGE

|                                                       |          |                |
|-------------------------------------------------------|----------|----------------|
| MF2-HD 3.5" DS/HD IBM FORMATTED DISKETTES .....       | #1495700 | <b>\$10.49</b> |
| MF2-DD 3.5" DS/DD IBM FORMATTED DISKETTES .....       | #1495696 | <b>\$7.99</b>  |
| OC-012 3.5" 128MB REWRITABLE OPTICAL DISKETTES .....  | #1764127 | <b>\$53.99</b> |
| MF2-HDM 3.5" DS/HD HI-DENSITY DISKETTES .....         | #139540  | <b>\$9.99</b>  |
| MF2-HD 3.5" DS/HD MAC FORMATTED DISKETTES .....       | #1764116 | <b>\$11.99</b> |
| MD2-HD 5.25" DS/HD HI-DENSITY DISKETTES .....         | #94858   | <b>\$7.49</b>  |
| MD2-D 5.25" DS/DD DISKETTES .....                     | #139880  | <b>\$4.98</b>  |
| MD2-D 5.25" DS/DD FORMATTED DISKETTES .....           | #1495674 | <b>\$5.49</b>  |
| CS-600 XD 155MB STREAMER CASSETTE .....               | #1527218 | <b>\$15.95</b> |
| DC2000R 40MB 1/4" DATA CARTRIDGE .....                | #1630606 | <b>\$12.99</b> |
| DC2120R 120MB 1/4" DATA CARTRIDGE .....               | #1720235 | <b>\$15.99</b> |
| DC6150R 150MB 1/4" DATA CARTRIDGE .....               | #1630592 | <b>\$18.59</b> |
| DC6250R 250MB 1/4" DATA CARTRIDGE .....               | #1720224 | <b>\$23.99</b> |
| HS-4/90 2GB 4MM HELICAL-SCAN DATA CARTRIDGE .....     | #1630558 | <b>\$14.99</b> |
| HS-8/112 2.5GB 8MM HELICAL-SCAN DATA CARTRIDGE ....   | #1527230 | <b>\$11.95</b> |
| DC2120R XIMAT 120/250MB 1/4" FORMATTED DATA CARTRIDGE | #1720246 | <b>\$17.99</b> |
| HS-4CL 4MM CLEANING KITS FOR 4MM TAPE DRIVES .....    | #1630569 | <b>\$14.99</b> |



## PARANA PRINTER RIBBONS MAKE A GREAT IMPRESSION.™

### FOR EPSON®

|                                                             |               |
|-------------------------------------------------------------|---------------|
| <b>205S</b> Black. For Model LQ2550.....                    | <b>\$4.99</b> |
| #1611874                                                    |               |
| <b>201S</b> Black. For Models FX80, MX-80, FX800, FX80..... | <b>\$2.99</b> |
| #1611874                                                    |               |
| <b>203S</b> Black. For Models LQ510, LQ850.....             | <b>\$2.99</b> |
| #1595664                                                    |               |

### FOR CITIZEN®

|                                                                |                |
|----------------------------------------------------------------|----------------|
| <b>131S</b> Black. For Models 12D, 180D, GSX-140, GSX-200..... | <b>\$4.95</b>  |
| #1595251                                                       |                |
| <b>132S</b> Four Color. For Model GSX-140.....                 | <b>\$14.95</b> |
| #1662733                                                       |                |

### FOR Panasonic®

|                                                      |               |
|------------------------------------------------------|---------------|
| <b>382S</b> Black. For Models 1123, 1124, 1124i..... | <b>\$5.99</b> |
| #1595723                                             |               |
| <b>383S</b> Black. For Models 1624, 1695.....        | <b>\$5.95</b> |
| #1647352                                             |               |
| <b>385S</b> Black. For Model KX-P2180.....           | <b>\$6.95</b> |
| #1753226                                             |               |

### FOR IMAGEWRITER II

|                        |               |
|------------------------|---------------|
| <b>101S</b> Black..... | <b>\$2.99</b> |
| #1595240               |               |
| <b>102S</b> Color..... | <b>\$7.99</b> |
| #1662722               |               |

Home of Fast, Friendly, Courteous Service

# FRY'S ELECTRONICS

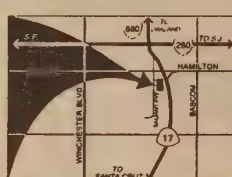
Prices Good Through October 11, 1993

Limit Rights Reserved Not Responsible For Typographical Errors

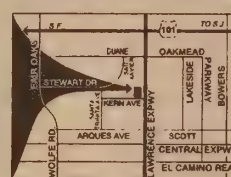
**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



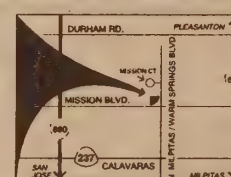
CORPORATE P.O. FAX #'s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044





# MULTIMEDIA



REVEAL  
COMPUTER PRODUCTS

## MULTIMEDIA FX DISCOVERY PACK



### DOUBLE SPEED CD-ROM DRIVE

- 540MB disk capacity
- 300KB data transfer rate
- 320ms access time
- Photo CD multi-session ready

### SOUND FX PLUS SOUND CARD

### SOUND FX CARD SPEAKERS

### CD TITLES INCLUDED:

- Multimedia Encyclopedia
- MS Multimedia Pack For Windows 3.1

MM040 #1811441

**\$349<sup>99</sup>**

REVEAL  
COMPUTER PRODUCTS

## MULTIMEDIA FX 16-BIT SUPER PACK



### Double Speed CD-ROM

300k Data Transfer Rate • 329ms Access Time.

Photo CD Multi-session Ready.

### SoundFX Pro 16EMC Sound Card

16-Bit Stereo Record & Playback.

100% Compatible with Sound Blaster.

Adlib & Microsoft Sound System.

AT CD-ROM Interface

### Speaker System • CD-ROM Titles Included:

Software Toolworks Multimedia Encyclopedia  
Where In The World Is Carmen San Diego?  
MS Works Macromedia Action LE 25 For Windows  
Authorware Star LE Secret Of Monkey Island  
Secret Weapon Of The Luftwaffe  
LOOM • MS Multimedia Pack For Windows  
MM200  
#1811485

**\$559**

REVEAL  
COMPUTER PRODUCTS

## INTERNAL CD-ROM DRIVE



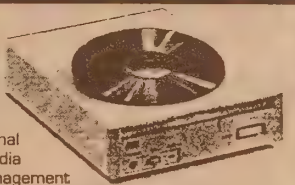
Internal CD-ROM drive; 540MB capacity, 350ms access time, 150KB data transfer rate. Multi-session Photo CD ready. Includes, host adapter, cables and installation video. Bundled with Multimedia Encyclopedia, The Animals, Mavis Beacon Teaches Typing, World Atlas, U.S. Atlas, Chessmaster 3000, Macromedia Action, Clip Media, Where In The World Is Carmen San Diego, LOOM, The Secret Of Monkey Island and Secret Weapons Of The Luftwaffe software.

CD120 #1811418

**\$349<sup>99</sup>**

REVEAL  
COMPUTER PRODUCTS

## INTERNAL CD-ROM DRIVE



With its high-speed design and precision optics, Reveal's CD110 internal CD-ROM drive gives you full access to today's most advanced multi-media programs. Including ones for education, entertainment, business management and health, with state-of-the-art effects such as action video clips, lively 3-D animations, brilliant color photographs and more. And with the CD110's fast 350ms data access time and 150KB data transfer rate, your programs will move along smoothly and quickly. You can also use the drive to play your favorite CDs while you work, or even to view your own photographs, because the CD110 is multi-session Photo-CD ready! Just have your pictures placed on CD by your local Kodak processing center. Includes controller card, cables, how-to video and instruction booklet.

CD110

#1811407

**\$279<sup>99</sup>**

## CALYPSO AUDIO MAGICIAN PLUS 16-BIT SOUND CARD

### SOUND BLASTER & AD-LIB COMPATIBLE

Microphone Jack • Game Port  
Audio Recorder • Audio Reminder,  
Talking Clock,  
Talking Calculator,  
Audio Clip Library,  
Timer & Stopwatch

#1811784

16 BITS FOR  
THE PRICE OF  
AN 8 BIT!

FREE



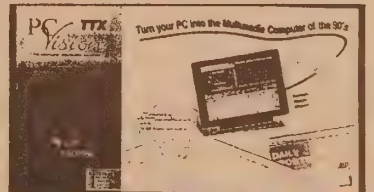
**\$79<sup>99</sup>**

## META MULTIMEDIA WONDER CARD!

### CALYPSO PC VISION TTX

- Super VGA • Video Capture 16-Bit Sound
  - Television & Teletext on One Card
- Access USA Today and complete Stock Market encoded within Action 36 TV signal. Works with cable, broadcast or satellite input.

#1811865



NO FEATURE  
CONNECTOR  
REQUIRED

**\$499<sup>99</sup>**

## Microsoft Windows Sound System

Make a sound investment to increase your productivity! You can hear spreadsheet numbers read back to you, annotate documents with sounds and voice messages, even execute commands simply by speaking to your computer. Designed for business, this audio software and hardware package for the Windows Operating system version 3.12 will help you work faster and smarter!

Includes: 16 Bit Audio Card

Dual Media Software

Microphone • Headphones

#1742624



**\$219**

## MPC700 SOUNDPRO

Digital signal processing.  
The ultimate in sound card technology.

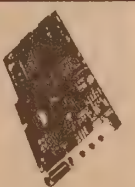
#1811980

Cardinal™

**\$139<sup>99</sup>**

COMPUTER PERIPHERALS, INC.

## Maestro 16 Sound Card



### With Wave Table Sound

16 Bit Wave Table Sound • SCSI I and II Interface  
Sierra Aria Chip • CD-ROM SCSI Port • Digital Signal Processing  
MIDI/Game Port • 32 Voice Synthesizer  
44KHz Record/Playback • 5 Year Limited Warranty  
#1778560

Viva  
MULTI-MEDIA

**\$179**

Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

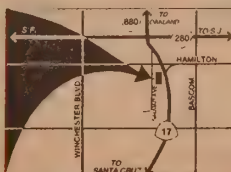
Prices Good Through  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

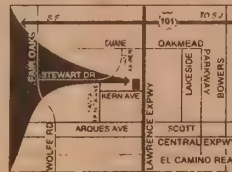
HOURS:  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA VISA AND  
MASTERCARD  
ACCEPTED

CORPORATE P.O. FAX #'s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# MULTIMEDIA

**CREATIVE**  
CREATIVE LABS, INC.

## SOUND BLASTER 16

**ADVANCED SIGNAL PROCESSING**

- Complete Programmable Advanced Signal Processing
- Real Time Hardware Compression & Decompression
- MPC 401 UART Mode
- Includes HSC Interactive, PC Animate Pro & Microphone

#1751718



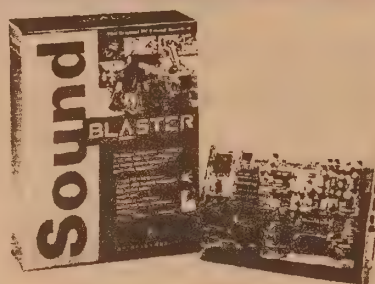
**\$199**

**CREATIVE**  
CREATIVE LABS, INC.

## SOUND BLASTER™ DELUXE

- 11-Voice FM Music Synthesizer
- 8-bit Digitized Voice Channel Input and Output
- Joystick Port
- Built-In Power Amplifier
- Free Game Software: INDY 500 and Lemmings
- Windows 3.1 Compatible

#1768844



**\$79**

**CREATIVE**  
CREATIVE LABS, INC.

## VIDEO BLASTER™

Display full-motion video in a window, overlay computer text and graphics on video. Freeze, store, manipulate, and import images from VCR's, video discs, video cameras, or any video source. Digital analog sound mixer and programmable volume controls. Bundled software: Video Kit utilities including JPEG compression, Macromedia Action! Presentation package, Tempra graphics and multimedia authoring system from Mathematica.

#1697483



**\$309**

## PROFESSIONAL PRESENTATION PERFORMANCE PRO 16 MULTIMEDIA SYSTEM

Pro AUDIO Spectrum 16

NEC Multi Speed SCSI Multimedia CD-ROM

Average access 280ms • Sustained data transfer 300kB/sec  
Burst rate 1.5MB • 64kB buffer

MACROMIND ACTION (Multimedia Presentation Software)

Windows 3.1 • Lotus 1-2-3 for Windows

Compton's M.M. Encyclopedia

#1679548



MEDIA VISION

**\$679<sup>99</sup>**

## 16,777,216 COLORS, 307,200 BYTES TRANSFER RATE, 44,000 SAMPLES PER SECOND. WINSTORM CD-ROM MULTIMEDIA UPGRADE KIT

WinStorm Multimedia Display Adapter • Double Speed CD-ROM Driver Software • Bracket & Cables • User Manuals  
Compton's Multimedia Encyclopedia • Kodak's Photo CD Access Software & Photo Sampler • Animation's MCS MusicRack  
Where In The World Is Carmen San Diego Deluxe  
Asymetrix's Multimedia Make Your Point  
Midisoft's Music Library

#1776889



**SIGMA  
DESIGNS**

**\$699**

Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

Prices Good Through  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

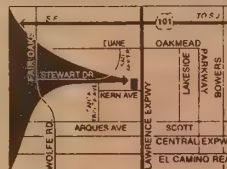
**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA VISA MasterCard  
AND  
MASTERCARD  
ACCEPTED

CORPORATE P.O. FAX #'s



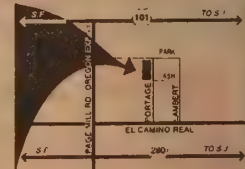
**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# ECONOMIC ENTERTAINMENT ENHANCEMENTS FOR PRECISION POWER PLAYERS

## FLY THE ELECTRONIC SKIES **FlightStick**

- #1 SELLING JOYSTICK
- **ULTIMATE CONTROL**  
Has total 360 degree cursor control
- **ADDED THROTTLE CONTROL ON IBM PC MODELS**  
Gives you better speed control
- **DUAL AXIS TRIM CONTROLS**
- **LINEAR POTENTIOMETERS**  
Rated at 4 million life cycles

#1704277

**CH GAME  
CARD III  
AUTOMATIC**  
#1740666  
**\$34<sup>99</sup>**

**\$39<sup>99</sup>**

COLORADO  
**SPECTRUM**

**MOUSE • WHEEL**

Converts your mouse into a realistic race car steering wheel! Adds a exciting dimension to your computer driving experience... a dimension that keyboard or mouse alone can't provide. Creatively designed accessory turns any mechanical (ball-type) mouse into a realistic race car steering wheel! Included *Stunts*, the standard-setting stunt driving simulation software from Broderbund! #1737486

**PERFECT FOR MAC!**

**\$34<sup>99</sup>**

COLORADO  
**SPECTRUM**

**THE  
MOUSE  
YOKE**

The Mouse Yoke allows any existing mechanical (ball-type) mouse to function as an aircraft-style yoke, adding a great deal of realism to flight simulation and other pilot/driver applications. The Mouse Yoke may be used with almost any program that supports the use of a mouse for directional control. #1706718

**PERFECT  
FOR MAC!**

**\$29<sup>99</sup>**

**Suncom  
TECHNOLOGIES**

## **Analog EDGE JOYSTICK**

Features 2-Way  
Switchable Fire Buttons  
#1598818

**\$10<sup>99</sup>**

**Suncom  
TECHNOLOGIES**

## **The FX 2000 JOYSTICK**

Switchable Fire Buttons  
On command Auto Fire  
High Performance Cursor Control  
Advanced Ergonic Grip  
Left or Right Handed Play  
Throttle Control  
#1712577

**\$24<sup>99</sup>**

**Suncom  
TECHNOLOGIES**

## **COMMAND CONTROL**

- IBM Adventure Game Control Pad
- Ultra Responsive Control Disc for 360° Cursor Control
- 5 Action Buttons for Complete Control

#1712566  
**\$16<sup>95</sup>**

**KRAFT  
SYSTEMS INC.**

## **THUNDER STICK**

The Kraft Thunderstick is available in two models, one design for use with the Apple IIe, IIs and compatibles and another for IBM PC, XT, AT PS/2 and compatibles. Great for flight simulator and arcade software. Fast response, rugged and accurate design. Throttle control features defeat switch which allows the Thunderstick to be used with two joystick software. Six foot cord lets you fly from desktop to laptop. Backed by a five year limited warranty from Kraft. #1629015

**\$24<sup>99</sup>**

**KRAFT  
SYSTEMS INC.**

## **K130 JOYSTICK**

A precision analog joystick to meet all your needs, the K130 is great for graphics, business, education and entertainment software! K130 is compatible with IBM PC, XT, AT, PS/2 and compatibles. Features include "free-floating" or "spring-centering" operating modes, dual-axis centering controls. Comes with Kraft's joystick utility software "JSOFT" Covered by Kraft's Five year limited warranty. K130 #1628999

**\$19<sup>99</sup>**

**KRAFT  
SYSTEMS INC.**

## **PROGRAMMABLE GAME CARD**

Kraft simplifies high performance. The Software Controlled Two Port Game card allows you to precisely match the clock speed of our IBM PC, XT, AT, PS/2 or compatible computer. "Hot Key" and software adjustable setting to match clock speed from 4.77 to 35 MHz. Two ports support two joysticks for twice the fun. Backed by Kraft's five year limited warranty. #1629059

**\$19<sup>99</sup>**

Home of Fast, Friendly,  
Courteous Service  
 **fry's  
ELECTRONICS**  
Prices Good Through  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

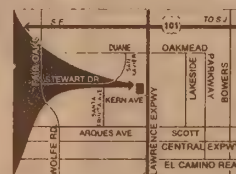
**HOURS:  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM**

**VISA VISA AND  
MASTERCARD  
ACCEPTED**

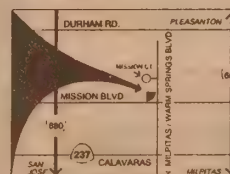
CORPORATE P.O. FAX #'s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



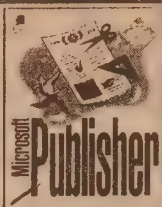
**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# YOUR BEST SOFTWARE BUYS ARE ALWAYS AT FRY'S

## Microsoft Publisher 2.0 For Windows

Publisher gives you the power of a full-featured desktop publishing program and the tools to create publications in just a few easy steps. The interactive PageWizard™ design assistant helps you get started. Whether you're creating a newsletter, brochure, flyer, or your own unique communication piece, the steps are always easy, and the results are always professional.



IBM #1812497

**\$99<sup>95</sup>**

Traveling Software

## LAPLINK V

**MORE POWERFUL THAN EVER BEFORE!**

LapLink V carries on the tradition of excellence found in every one of Traveling Software's products. This new release is truly the "next generation in file transfer software." With LapLink V you'll get more of everything you need to work smarter and faster.



IBM #770403

**\$109<sup>95</sup>**

## THE SEVENTH GUEST CD-ROM

The Seventh Guest is the first interactive drama in a terrifyingly real, virtual environment complete with live actors. Key Features:

- Video clips with live actors.
- Bizarre games and puzzles.
- 22 fully-rendered rooms to explore in a fully 3-D haunted mansion with ghostly surprises lurking in every shadow.



IBM CD-ROM #1744361

**\$54<sup>95</sup>**

## Lotus 1-2-3 Release 4.0

**For Windows Upgrade**

**The Best Spreadsheet To Keep Tabs On Your Work!**

1-2-3 Release 4 For Windows sets a new standard in usability, performance and power! Redesigned to make every spreadsheet task easier for people working on their own or in a group. Superior compatibility for DOS users moving to Windows.



IBM #1800551

**\$98<sup>95</sup>**

## Microsoft Word For Windows Upgrade

Great news for Wordperfect, Wordstar and other Wordprocessor users: there's never been a better time than now to upgrade to MS Windows applications.



IBM #1738546

**\$118<sup>95</sup>**

## BORLAND Turbo C++ Visual Edition for Windows

Turbo C++ Visual Edition for Windows is simply the best visual C and C++ compiler and tools for fast Windows application development and it's now available at a great price!



IBM #1778021

**\$78<sup>95</sup>**

## IBM OS/2 2.1 UPGRADE

**A better DOS than DOS, a better Windows than Windows and a better operating system than the rest of them.**

Now you can upgrade from old DOS 1.X and Windows 2.X or higher to OS/2 2.1 for less money.



IBM #1804902

**\$98<sup>95</sup>**

## WordPerfect 5.2 for Windows

**THE BEST IN WINDOWS WORD PROCESSING!**

WordPerfect for Windows takes full advantage of the Windows graphical abilities, giving you all the benefits of the world's leading word processor in a program that's simple, powerful and fun to use. It comes with button bars that can be created and customized. Its tables, equations, lists and columns are greater than ever and now comes with DOE. It is compatible with 5.1 DOS.



WordPerfect CORPORATION IBM #1748734

**\$289**

## Microsoft MS-DOS 6 Upgrade

Introducing the Microsoft MS-DOS 6 upgrade, which makes it easy to double the size of your hard disk and do much more. You also get features that protect your data and free more memory for your MS-DOS based applications. Plus, integration of MS-DOS 6 with the Microsoft Windows operating system means the MS-DOS 6 Upgrade is a must-have for users of Windows!



IBM #1771460

**\$47<sup>95</sup>**

## X-WING IMPERIAL PURSUIT

Imperial Pursuit comes with 15 more X-Wing Missions. You can view new cinematic action sequences with music and sound effects. X-Wing required.



IBM #1807639

**\$18<sup>95</sup>**

## STAR TREK THE SCREEN SAVER FOR WINDOWS

Star Trek is a screen saver that also features authentic AudioClips from Sound Source Unlimited - The actual sound effects, music and dialog from the original series. Some features included: Over 15 Star Trek graphic displays. Runs all After Dark displays. Screen-locking security system. Digital Sound without any hardware.

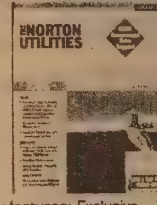


BERKELEY SYSTEMS IBM #1742602

**\$29<sup>95</sup>**

## SYMANTEC THE NORTON UTILITIES NEW VERSION 7.0

Norton Utilities 7.0 provides everything you need to keep your entire computer system running as it should. Some of its New features: Exclusive Data Recovery & Disk optimization of DOS 6.0 DoubleSpace, Stacker & Superstor compressed drives. Complete Hardware Diagnostics. Supports hard disks ten times larger in size.



IBM #1779044

**\$119<sup>95</sup>**

**Home of Fast, Friendly, Courteous Service**  
**FRY'S ELECTRONICS**

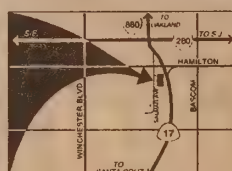
Prices Good Through October 11, 1993

Limit Rights Reserved Not Responsible For Typographical Errors

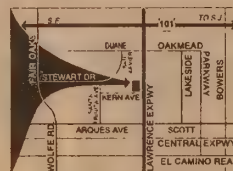
**HOURS:**  
**MON-FRI**  
**8AM-9PM**  
**SATURDAY**  
**9AM-8PM**  
**SUNDAY**  
**9AM-7PM**

VISA VISA AND MASTERCARD ACCEPTED

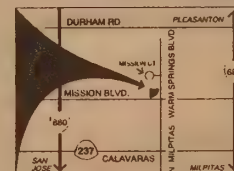
CORPORATE P.O. FAX #'s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# THE HOTTEST COMPUTER BOOK TITLES AT THE HOTTEST PRICE!

## OPERATING SYSTEMS

|                                                                     |                                                                              |
|---------------------------------------------------------------------|------------------------------------------------------------------------------|
| MS DOS 6.0 Quick Reference Guide #1776328 <b>\$6<sup>95</sup></b>   | PC Magazine's DOS 6 Techniques & Utilities #1809239 <b>\$34<sup>95</sup></b> |
| Windows Programmer's Guide To OLE #1733460 <b>\$30<sup>49</sup></b> | Using OS/2 2.1 Special Edition #1809701 <b>\$25<sup>95</sup></b>             |
| Mastering Windows 3.1 #1802759 <b>\$24<sup>49</sup></b>             | UNIX In A Nutshell 2nd Edition #1778722 <b>\$8<sup>49</sup></b>              |
| Inside Windows NT #1753617 <b>\$21<sup>49</sup></b>                 | Friendly Windows 3.1 #1776373 <b>\$4<sup>95</sup></b>                        |
| Using MS DOS 6.0 Special Edition #1778766 <b>\$25<sup>95</sup></b>  | Peter Nortons Guide To UNIX #1611335 <b>\$23<sup>49</sup></b>                |

## LANGUAGES

|                                                                               |                                                                                               |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Turbo C/C++ Complete Reference, 2nd Edition #1745591 <b>\$25<sup>95</sup></b> | PC Magazine's Guide To Windows W/ Borland #1731088 <b>\$34<sup>95</sup></b>                   |
| Teach Yourself C In 21 Days #1753879 <b>\$21<sup>49</sup></b>                 | PC Magazine's Visual Basic Program Guide To The Windows API #1794300 <b>\$30<sup>95</sup></b> |
| C By Example #1730973 <b>\$18<sup>95</sup></b>                                | The Waite Group's Object Oriented Programming #1650440 <b>\$25<sup>95</sup></b>               |
| Running MS DOS QBasic #1598209 <b>\$19<sup>95</sup></b>                       | Borland C++ 3.1 Object Oriented Programming #1753499 <b>\$25<sup>95</sup></b>                 |
| Microsoft Visual Basic For Windows #1822722 <b>\$34<sup>95</sup></b>          | Learn Basic Now w/disk #1724583 <b>\$17<sup>49</sup></b>                                      |

## COMMUNICATIONS & NETWORKS

|                                                                       |                                                                                          |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Novell Netware Troubleshooter #1662711 <b>\$8<sup>69</sup></b>        | PC Magazine's Guide To Connectivity 2nd Edition w/disk #1712289 <b>\$34<sup>95</sup></b> |
| Internet Companion Beginner's Guide #1763023 <b>\$9<sup>49</sup></b>  | How Networks Work #1802656 <b>\$21<sup>49</sup></b>                                      |
| Using Novell Netware 2nd Edition #1680852 <b>\$25<sup>99</sup></b>    | Whole Internet Users Guide & Catalog #1745694 <b>\$19<sup>95</sup></b>                   |
| TCP/IP Network Administration #1745535 <b>\$23<sup>95</sup></b>       | The Off Amer On-Line Membership Kit #1793170 <b>\$27<sup>95</sup></b>                    |
| Managing UUCP & Usenet 10th Edition #1729979 <b>\$24<sup>49</sup></b> | Dvorak's Guide To PC Connectivity #1702909 <b>\$43<sup>96</sup></b>                      |

## SPREAD SHEETS

|                                                                                  |                                                                                         |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Excel For Windows Quick Reference Guide w/disk #1813395 <b>\$13<sup>49</sup></b> | Using Lotus Improv For Windows #1803037 <b>\$21<sup>49</sup></b>                        |
| Mastering Excel 4 For Windows #1696677 <b>\$26<sup>19</sup></b>                  | 123 For Dummies #1766691 <b>\$14<sup>95</sup></b>                                       |
| Excel 4 For Scientists & Engineers #1783801 <b>\$24<sup>49</sup></b>             | I Hate Excel #1793055 <b>\$14<sup>95</sup></b>                                          |
| 123 Release 3.4 Quick Reference #1778858 <b>\$8<sup>49</sup></b>                 | Complete Guide To Microsoft Excel Macros, 2nd Edition #1766277 <b>\$25<sup>95</sup></b> |
| Using 123 For Windows New Edition #1803071 <b>\$25<sup>95</sup></b>              | Running Microsoft Excel 4 3rd Edition #1719530 <b>\$25<sup>95</sup></b>                 |

## WORD PROCESSING

|                                                                               |                                                                   |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Word Perfect 6.0 Quick Reference Guide #1801057 <b>\$6<sup>49</sup></b>       | Word Perfect For Dummies #1745753 <b>\$13<sup>49</sup></b>        |
| Using Word For Windows 2.0 #1672699 <b>\$24<sup>99</sup></b>                  | Friendly Word 2.0 For Windows #1776362 <b>\$4<sup>95</sup></b>    |
| Microsoft Word For Windows 2.0 Step By Step #1696703 <b>\$26<sup>19</sup></b> | Mastering Ami Pro 2nd Edition #1740781 <b>\$19<sup>95</sup></b>   |
| Using Word Perfect 6.0 #1803060 <b>\$25<sup>95</sup></b>                      | Word For Windows Companion #1696932 <b>\$25<sup>95</sup></b>      |
| Using Word Perfect 5.2 For Windows #1766635 <b>\$25<sup>95</sup></b>          | Using Ami Pro 3 Special Edition #1763229 <b>\$24<sup>49</sup></b> |

## MACINTOSH

|                                                                  |                                                                                   |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Macs For Dummies #1733312 <b>\$14<sup>95</sup></b>               | Teach Yourself Word For The Mac, 2nd Edition #1796966 <b>\$21<sup>49</sup></b>    |
| Mac Bible Guide To Claris Work #1802690 <b>\$19<sup>49</sup></b> | Upgrade Your Mac & Save A Bundle #1729500 <b>\$18<sup>95</sup></b>                |
| Mac Bible Guide To System 7.1 #1753721 <b>\$12<sup>95</sup></b>  | Mac C Programming Primer Vol 1 2nd Edition #1712120 <b>\$23<sup>49</sup></b>      |
| Mac Bible 4th Edition #1753732 <b>\$27<sup>95</sup></b>          | Powerbook Digital Nomads Guide #1778629 <b>\$20<sup>95</sup></b>                  |
| The Mac Internet Tour Guide #1815054 <b>\$24<sup>49</sup></b>    | The Complete Hypercard 2.0 Handbook 3rd Edition #1811289 <b>\$25<sup>95</sup></b> |

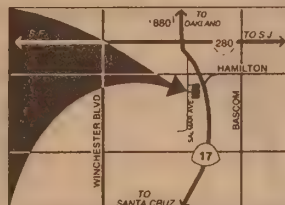
Home of Fast, Friendly, Courteous Service

# FRY'S ELECTRONICS

Prices good thru October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



# CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

VISA AND  
MASTERCARD

**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# INCREDIBLE INPUT INVESTMENTS KEYBOARDS & POINTING DEVICES

**MAXIMIZE PRODUCTIVITY  
WITH Maxi Switch**

## ProKEY 124 124-KEY KEYBOARD

**ELIMINATES MANY REPETITIVE MOTIONS**  
Fully Programmable,  
Remappable and Versatile.  
#1756931



**\$79<sup>99</sup>**

## IBM BASIC 101-KEY KEYBOARD

- IBM PS/1, PS/2, 286 AT And Compatibles
- 12 Function Keys
- Audible And Tractable Feedback
- Includes 6-Pin To 5-Pin Adapter
- 1-Year Warranty
- IBM 30-Day Money Back Guarantee

Model KB570  
#1779343

**Options  
by IBM**

**\$69<sup>99</sup>**

## IBM PROFESSIONAL 101-KEY KEYBOARD

- IBM PS/1, PS/2 And Compatibles
- Curved Profile, User Adjustable Angle
- Positive Tactile Feedback
- Includes 6-Pin To 5-Pin Adapter
- 1-Year Warranty
- IBM 30-Day Money Back Guarantee

Model KB571  
#1779354

**Options  
by IBM**

**\$99<sup>99</sup>**

## Microsoft Mouse

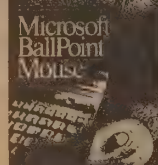
Breakthrough ergonomic research and innovative features make the Microsoft Mouse the ultimate pointing device for the Windows operating system. Hold the mouse in either hand with equal comfort and support. Exciting features include: Snap-To, Screen Wrap, Locate, Magnify, Orientation and Meet The Mouse.  
#1794171



**\$79<sup>99</sup>**

## NO SURFACE REQUIRED Microsoft Ballpoint Mouse

**w/Trivial Pursuit For Windows**  
400 DPI • Set Mouse Variables with control Panel in Windows or DOS. Compatibility?... No Question!  
#1749333



**\$109<sup>99</sup>**

## MOUSEMAN™ PROGRAMMABLE 3 BUTTON MOUSE

Ergonomic Design • 400 DPI  
Total Microsoft Compatibility  
Serial & PS/2 Connectors  
Fully Programmable  
#1825688



**LOGITECH**

**\$69<sup>99</sup>**

## NEW TRACKMAN™ PORTABLE

Turns Any Space Into  
A Workspace.  
Small, lightweight, ergonomic.  
For right or left handed use.  
100% Microsoft™ compatible.  
#1820256



**LOGITECH**

**\$89<sup>95</sup>**

## ANTEC BLACK 101-KEY KEYBOARD

AT/XT Compatible  
#1780738

**\$49<sup>99</sup>**

## itek 104-KEY TACTILE KEYBOARD

WITH THE ORIGINAL "CLICK"  
#1471858

**\$59<sup>95</sup>**

## MICRO SPEED 101-KEY KEYBOARD

For ATs, PS/2, Laptops, and  
notebooks. Includes adapter.  
#1796379

**\$44<sup>99</sup>**

## QTRONIX 101-KEY KEYBOARD

High Quality Rubber  
Membrane Technology  
Switch Selectable for PC/XT or AT  
Tactile Key Stroke • Auto Repeat  
#1747102

**\$13<sup>99</sup>**

## GET THE CLICK! SUNTOUCH 101-KEY KEYBOARD

FEATURING ALPS  
KEY SWITCHES  
SIIG #1810750

**\$59<sup>99</sup>**

## GET THE CLICK! SUNTOUCH JR. 101-KEY KEYBOARD

FULL FUNCTION AND  
SPACING OF 101 KEY  
KEYBOARD IN A  
REDUCED FOOTPRINT  
SIIG #1814961

**\$69<sup>99</sup>**

## 2-BUTTON MOUSE

Microsoft Compatible  
350 DPI Hi Resolution  
Ultra Res Ballistic Acceleration  
#1810819

**\$24<sup>99</sup>**

## New Point Portable Trackball for Laptops & Notebooks

2 button opto-mechanical input device.  
High 200 DPI resolution.  
Windows & Microsoft compatible  
#1723641

**\$79<sup>99</sup>**

## PenMate™

- Serial device. Works with keyboard and mouse
- 1000 Lines Per Inch Resolution
- Microsoft Windows Pen Computing included.
- Programmable Gesture Commands
- Trainable to recognize anyone's style of print.
- Windows pen extensions included
- Full keyboard and mouse emulation capable

**\$169<sup>99</sup>**

## ANTEC 3-BUTTON BLACK MOUSE

Microsoft & Mouse Systems  
Compatible  
#1780750

**\$19<sup>99</sup>**

## Honeywell 2-BUTTON MOUSE

GRAVITY INDEPENDENT  
Microsoft & PS/2 Compatible  
Unique X-Y Axially Inclined  
Optical Encoder  
#1797381

**\$59<sup>99</sup>**

## ACECAT PC GRAPHICS TABLET & MOUSE EMULATOR

1000 Lines Per Inch  
5" X 5" Active Area. Includes Stylus-Pen  
And Comprehensive Utilities Diskette  
Including Custom Drivers for Mouse,  
Windows, Control Panel and ADI.  
#1659900

**\$109<sup>99</sup>**

## MICRO SPEED MICROTRAC PC

Size 2.8" x 2.0" x 1.25" • Weight 4.0 Oz  
50 - 9600 DPI • Microsoft Compatible  
Mounting Bracket Included  
Serial & PS/2 • Connectors  
Drag-Lock Button  
#1821903

**\$58<sup>88</sup>**

## INTERLINK PortaPoint™

Gently touch the unique  
sensor button to control  
both speed and direction.  
PortaPoint comes  
complete with a PS/2 adapter, a quick-  
release Velcro attachment and a 3 1/2"  
DOS driver diskette. (5 1/4" available).  
#1747825

**\$59<sup>99</sup>**

## Options by IBM MINI TRACK

PORTABLE POINTING OR  
EXTREME SPACE SAVING  
SOLUTION  
#1779309

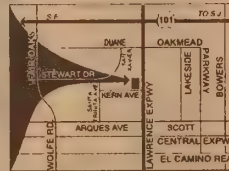
**\$89<sup>99</sup>**

Home of Fast, Friendly,  
Courteous Service  
**FRY'S ELECTRONICS**  
Prices Good Through  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM  
VISA AND  
MASTERCARD  
ACCEPTED  
CORPORATE P.O. FAX #s



**CAMPBELL**  
600 E Hamilton Ave.  
(408) 364-3700  
(408) 364-3790



**SUNNYVALE**  
1177 Kern Ave.  
(408) 733-1770  
(408) 735-6800



**FREMONT**  
440 Mission Ct.  
(510) 770-FRYS(3797)  
(510) 770-3700



**PALO ALTO**  
340 Portage Ave.  
(415) 496-6000  
(415) 496-6044



# AVOID SYSTEM MELTDOWN!



**APC**  
American Power Conversion

## SURGE ARREST PLUS

7 Outlet and  
240 Joules Dissipation  
Site fault wiring indicator

#1651256

LIFETIME  
\$10,000  
CONNECTED  
EQUIPMENT  
WARRANTY

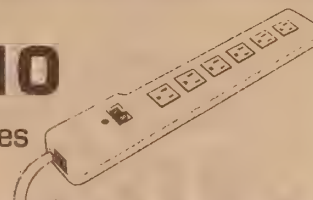
**\$19<sup>99</sup>**



## KENSINGTON™ POWERTREE 10

Suppresses Surges up to 120 Joules  
15 AMP Circuit Breaker  
Platinum Color  
Six outlets  
#1423578

**\$13<sup>99</sup>**



**APC**  
American Power Conversion

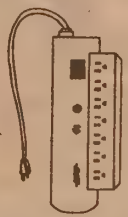
## SURGE ARREST PLUS

7 Outlet and  
480 Joules Dissipation  
EMI/RFI Filtering (Helps Reduce  
Random Lock-Ups & Parity Errors)  
Site fault wiring indicator

#1651290

LIFETIME  
\$25,000  
CONNECTED  
EQUIPMENT  
WARRANTY

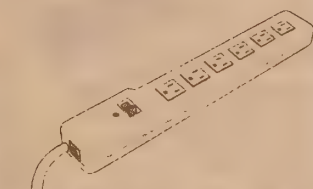
**\$39<sup>99</sup>**



## KENSINGTON™ POWERTREE 20

Surge Suppression Indication: LED and  
Buzzer Alarm  
Clamping Voltage: 340 V  
Current Peak: 4500 Amps;  
Energy Dissipation: 120 Joules  
Typical Response, Time: <1 nanosecond  
Warranty: 1 Year #1423589

**\$22<sup>99</sup>**



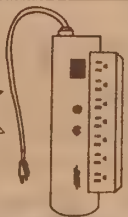
**APC**  
American Power Conversion

## SURGE ARREST PLUS WITH TEL

7 Outlet and Provides Protection  
for Fax & Modem lines  
480 Joules Dissipation  
EMI/RFI Filtering  
Status and wiring  
Site fault wiring #1651326

LIFETIME  
\$25,000  
CONNECTED  
EQUIPMENT  
WARRANTY

**\$69<sup>99</sup>**

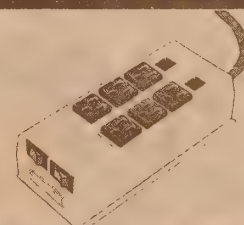


## KENSINGTON™ POWERTREE 50 6 PLUG SURGE PROTECTOR

Modem & Fax Protection  
Noise Filter & Alarm

#1423604

**\$49<sup>99</sup>**



## Intelestrip800

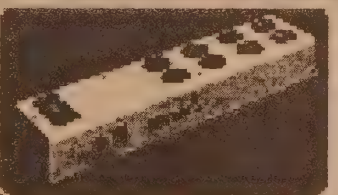
The Power Strip with Intelligent Control

Ideal for remote laptop computer users  
- now you can turn on your home/office  
computer from anywhere in the world!

- Activate power by telephone, manual switch,  
TTL or RS-232 signal
- Built-in Timer with user controlled off delay of  
18 seconds to 3 days.

#1544004

**\$89<sup>99</sup>**



## REMOTE POWER ON/OFF

- REMOTE POWER ON/OFF
- REMOTE POWER CONTROL
- ENABLES REMOTE POWER ON FROM ANY TELEPHONE

#1662191

**\$149<sup>95</sup>**

Home of Fast, Friendly,  
Courteous Service

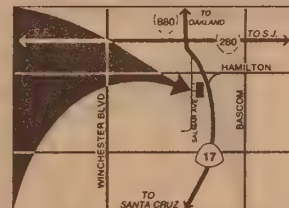
# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

HOURS:  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



### SUNNYVALE

1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

### FREMONT

440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

### PALO ALTO

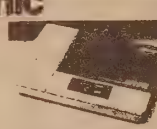
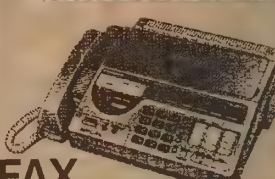
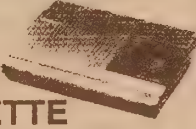
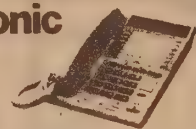
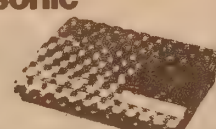
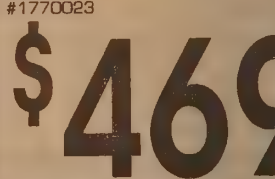
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790



# YOUR BEST PANASONIC HOME OFFICE BUYS ARE ALWAYS AT FRY'S!

| ANSWERING MACHINES                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SPEAKER PHONES                                                                                                                                                                                                                                                                                                                                                                                                                            | MULTI-LINE BUSINESS PHONES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CORDLESS PHONES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FAX MACHINES                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Panasonic</b><br><br><b>ANSWERING MACHINE</b><br>Answering system with Auto-Logic Operation, Tone Remote Control, Digital Display, Message Memo Recording and Remote turn on, Auto-Logic Operation Automatically Rewinds, Plays Messages, Stops at the Last Message and Resets itself at the Touch of One Button.<br><b>\$39<sup>95</sup></b><br><small>MODEL KX-T1000 #1498194</small>                     | <b>Panasonic</b><br><br><b>SPEAKERPHONE</b><br>For the office or home, this phone has all the features you need. It has a speaker phone, 28 station automatic dialer, automatic redial and much more.<br><b>\$39<sup>95</sup></b><br><small>MODEL KX-T2315 #1530100</small>                                                                              | <b>Panasonic</b><br><br><b>TWO LINE PHONE</b><br>A two line phone doesn't have to cost a fortune. Panasonic has the low cost answer for you. This unit has a convenient auto dialer, conference calling and much more!<br><b>\$49<sup>95</sup></b><br><small>MODEL KX-T3110 #1505313</small>                                                                                                                                                                        | <b>Panasonic</b><br><br><b>10 CHANNEL CORDLESS PHONE</b><br>Most cordless phones have a very short battery life, but this one can last up to 7 days in the standby mode! Add a flexible antenna, 10 number memory, 10 channels, paging and you have an excellent value at...<br><b>\$69<sup>95</sup></b><br><small>MODEL KX-T 3710 #1511309</small>                                                                                                                                                                      | <b>Panasonic</b><br><br><b>FAX MACHINE</b><br><b>WITH ANSWERING MACHINE AND ANTI-CURL</b><br>This fully featured Fax from Panasonic comes equipped with an auto-logic answering system and anti-curl, as well as copier capabilities. It's the perfect secretary for your home or business!<br><b>\$399</b><br><small>MODEL KX-F150 #1770001</small>      |
| <b>Panasonic</b><br><br><b>DUAL MICRO CASSETTE ANSWERING SYSTEM</b><br>Panasonic's new dual micro cassette answering system offers an LCD Call Counter, marker message, room monitor, auto disconnect, electronic auto disconnect, electronic volume control, audible message alert, and much more for only...<br><b>\$69<sup>95</sup></b><br><small>MODEL KX-T2100 #1740208</small>                          | <b>Panasonic</b><br><br><b>SPEAKER PHONE</b><br>This outstanding value from Panasonic offers one-touch dialing for up to 28 16-digit telephone numbers, auto redial for up to 15 times, redial memory transfer, and a save button for temporary redial memory storage for only...<br><b>\$49<sup>95</sup></b><br><small>MODEL KX-T2355 #1287186</small> | <b>Panasonic</b><br><br><b>2-LINE SPEAKERPHONE W/ LCD DISPLAY</b><br>From Panasonic comes this fully featured 2-line speakerphone with LCD display, 3-way conference call, volume control for speaker and handset, 24-station one-touch dialer, auto redial, flash, separate ringer tone, line status indicator, memo dial, and save redial, all for only...<br><b>\$89<sup>95</sup></b><br><small>MODEL KX-T3175 #1745122 AVAILABLE IN BLACK OR WHITE</small>     | <b>Panasonic</b><br><br><b>10 CHANNEL CORDLESS SPEAKERPHONE W/ANSWERING MACHINE</b><br>This new top of the line cordless answering system with sound charger technology delivers sound so clear, you will hardly believe your ears! Some of the features included are, 2 way paging, intercom, auto security system, message alert, 2-way and memo recording just to name a few. Now only...<br><b>\$159<sup>95</sup></b><br><small>MODEL KX-T4330 #1796483</small>                                                     | <b>Panasonic</b><br><br><b>FAX MACHINE</b><br><b>WITH PAPER CUTTER AND ANTI-CURL</b><br>This fully featured Fax from Panasonic comes equipped with an auto-logic answering system and auto paper cutter, as well as copier capabilities. It's the perfect secretary for your home or business!<br><b>\$469</b><br><small>MODEL KX-F250 #1770023</small> |
| <b>Panasonic</b><br><br><b>DUAL MICRO CASSETTE ANSWERING SYSTEM W/ VOICE TIME/DAY STAMP</b><br>Panasonic's new dual micro cassette answering system offers an LCD Call Counter, marker message, room monitor, auto disconnect, electronic auto disconnect, electronic volume control, audible message alert, and much more for only...<br><b>\$89<sup>95</sup></b><br><small>MODEL KX-T2300 #1740219</small> | <b>Panasonic</b><br><br><b>LCD READOUT SPEAKERPHONE</b><br>This outstanding value from Panasonic offers a 12-digit LCD readout for phone number, clock, call timer (minutes & seconds), and operating modes. Perfect for the home or office at only...<br><b>\$69<sup>95</sup></b><br><small>MODEL KX-T2365 #163665</small>                            | <b>Panasonic</b><br><br><b>3-LINE SPEAKERPHONE WITH LCD DISPLAY</b><br>From Panasonic comes this fully featured 3-line speakerphone with LCD display, 3-way conference call, volume control for speaker and handset, 48-station one-touch dialer, auto redial, flash, separate ringer tone, line status indicator, memo dial, and save redial, all for only...<br><b>\$159<sup>95</sup></b><br><small>MODEL KX-T3185 #1768039 AVAILABLE IN BLACK OR WHITE</small> | <b>Panasonic</b><br><br><b>10 CHANNEL CORDLESS SPEAKERPHONE WITH DUAL MICROCASSETTE</b><br>This new top of the line cordless dual microcassette answering system with sound charger technology delivers sound so clear, you will hardly believe your ears! Some of the features included are, 2 way paging, intercom, auto security system, message alert, 2-way and memo recording just to name a few. Now only...<br><b>\$199<sup>95</sup></b><br><small>MODEL KX-T4400 #1735370 AVAILABLE IN BLACK OR WHITE</small> | <b>Panasonic</b><br><br><b>FAX MACHINE</b><br><b>WITH PAPER CUTTER AND ANTI-CURL</b><br>This fully featured Fax from Panasonic comes equipped with an auto-logic answering system and auto paper cutter, as well as copier capabilities. It's the perfect secretary for your home or business!<br><b>\$469</b><br><small>MODEL KX-F250 #1770023</small> |

Home of Fast, Friendly, Courteous Service

# FRY'S ELECTRONICS

Prices good thru October 11, 1993

Limit Rights Reserved Not Responsible For Typographical Errors

**HOURS:**  
 MON-FRI 8AM-9PM  
 SATURDAY 9AM-8PM  
 SUNDAY 9AM-7PM

**VISA AND MASTERCARD**



**SUNNYVALE**  
 1177 Kern Ave. (408) 733-1770  
 CORPORATE P.O. FAX# (408) 735-6800

**CAMPBELL**  
 600 E. HAMILTON AVE.  
 (408) 364-3700  
 CORPORATE P.O. FAX# (408) 364-3790

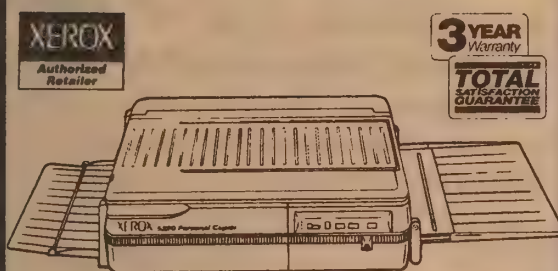
**FREMONT**  
 440 Mission Ct. (510) 770-FRYS(3797)  
 CORPORATE P.O. FAX# (510) 770-3700

**PALO ALTO**  
 340 Portage Ave. (415) 496-6000  
 CORPORATE P.O. FAX# (415) 496-6044



# YOU CAN'T DUPLICATE XEROX QUALITY

## XEROX PERSONAL COPIER



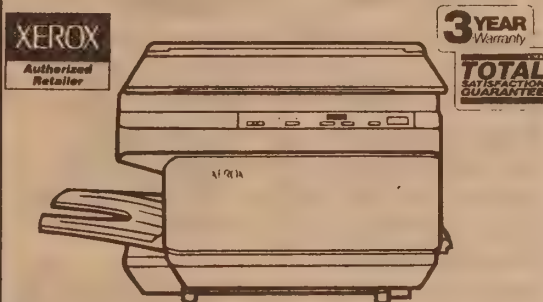
Don't settle for a copy when you can have the original... Xerox. Xerox is so confident in the quality and reliability of its copiers that it offers an exclusive 3 year warranty on all its copiers. This model offers a paper tray that stacks 40 sheets, a built-in carrying handle and removable storable paper trays, multi-copy capability which can be set from 1 to 9 copies or "C" for continuous up to 20 copies, and automatic exposure which scans documents for degrees of lightness or darkness to determining the appropriate exposure setting. An Invaluable addition to any home office. At only....

Model 5220  
#1706095

DRY INK CARTRIDGE NOT INCLUDED

# \$497

## XEROX COPIER w/REDUCTION & ENLARGEMENT



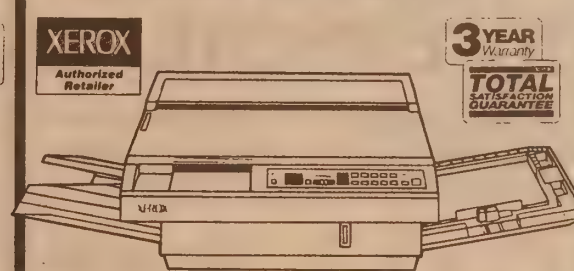
If you're looking for versatility and premium performance in a copier your search is over! Xerox has designed a copier that incorporates reduction/enlargement technology enabling you to reduce a copy 75% and 95%, and enlarge to 124%, a 250 sheet paper tray which adjusts to hold memo to letter to legal size paper, built-in automatic exposure which scans documents for degrees of lightness or darkness to determine the appropriate exposure setting, multi-copy capability of 1 to 50 copies, letter and legal size copying, and manual bypass, all backed by the experts at team Xerox. Now just...

Model 5009  
#1706109

DRY INK CARTRIDGE NOT INCLUDED

# \$797

## XEROX SMALL BUSINESS COPIER w/REDUCTION & ENLARGEMENT



Xerox engineers have developed an affordable copier for businesses with high volume demands. The Included copy cartridge is designed to deliver 18,000 copies and is guaranteed to deliver 16,000 before needing replacement. Other features include a 250 sheet paper tray, automatic exposure, photo mode to make clear copies of photographs, a graphic display which indicates the location of jammed paper, that the paper tray is empty, and that the copy cartridge is nearing the end of its life, a multi-copy button that can be set from 1 to 99 copies, dual electronic meters which displays the number of copies made by the cartridge in use of and the total number of copies made by the copier, an output tray that collects up to 110 finished copies, and much more. An excellent investment at...

Model 5011  
#1706121

# \$1597

Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



**GTE Mobilnet**

Authorized Sales Representatives

- Digital switching system
- Follow Me Roaming Service
- One-point billing

Ask for more details

# GET MOBILIZED

## AT FRY'S ELECTRONICS



**MOTOROLA**



### CELLULAR TOTE PHONE

This new addition to the Motorola family of cellular phones offer 30 number memory and 3 full watts of power for only...

Service Activation Not Required  
No Sales To Dealers Or Resellers  
Limit One Per Family

**\$179<sup>95</sup>**

Model  
S-3230  
#1751866

**uniden®**

### HANDHELD PORTABLE CELLULAR PHONE



Our latest handheld portable cellular phone is priced to go and includes dual NAM, 30 number memory, auto redial, 3 call timers, one touch redial, call restriction, signal level meter, low battery warning signals, plus illuminated LCD, a battery and AC adapter. All for the unbelievably low price of only...

Service Activation Not Required  
No Sales To Dealers Or Resellers  
Limit One Per Family

**\$179<sup>95</sup>**

Model  
CP6000  
#1787539



**MOTOROLA**

### TRANSPORTABLE HANDHELD CELLULAR TELEPHONE



Motorola's most popular Hand Held Phone has all the right features! This compact unit will allow you to talk for up to 90 minutes, keep 30 numbers in memory, and much more!

Service Activation Not Required  
No Sales To Dealers Or Resellers  
Limit One Per Family

**\$199<sup>95</sup>**

Model  
8000-HX  
#1502549



**MOTOROLA**

### CELLULAR FLIP PHONE



This premium value cellular phone from Motorola comes equipped with 30 number memory, LED display, call timer, signal strength meter, a battery with 75 minute total talk time, an overnight charger and a caring case for only....

Service Activation  
Not Required  
No Sales To Dealers  
Or Resellers  
Limit One Per Family

**\$289<sup>95</sup>**

Model  
DPC-550  
#1635999



**MOTOROLA**

### ALPHA MICRO-TAC CELLULAR PHONE



If it's small and lightweight that your looking for, this is the cellular phone for you! With its 101 alpha numeric memory, a desktop charger, and standard battery. This technologically advanced cellular phone can be yours only...

Service Activation  
Not Required  
No Sales To Dealers  
Or Resellers  
Limit One Per Family

**\$319**

Model  
DPC-950 BASE  
#1744545



**MOTOROLA**

### MICRO TAC LITE CELLULAR PHONE



Weighing in at 7.7 ounces and measuring 11.6 cubic inches, this is one of the lightest and most advanced cellular telephones available. With 100 alpha numeric memory, are tractable antenna, standard battery, and desktop charger, you can receive state of the art performance and design for only...

Service Activation  
Not Required  
No Sales To Dealers  
Or Resellers  
Limit One Per Family

**\$489<sup>95</sup>**

Model  
MICROTAC  
LITE BASE  
#1750739

**Home of Fast, Friendly,  
Courteous Service**

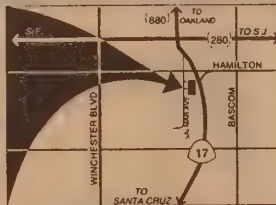
# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

**VISA AND  
MASTERCARD**



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# GET ORGANIZED AT FRY'S ELECTRONICS!

## SHARP 34K PERSONAL ORGANIZER

Perfect for the business person on-the-go, this compact data bank incorporates a 14 x 3 line display, built-in calendar, schedule, phone/memo, memo pad, expense, clock, anniversary, and calendar functions as well as QWERTY keyboard to simplify data entry. Once you've used this electronic marvel, you won't leave your home or office without it.

Model YO-110  
#1741472



**\$49<sup>95</sup>**

## PSION SERIES 3

### POCKET SIZED 256KB COMPUTER WITH BUILT-IN SPREADSHEETS

Psion has redefined the state of the art in hand held computers with the new Series 3. It may be small, but this pocket-sized programmable computer comes equipped with features found in desktop machines plus powerful built-in software, including a full specification word processor and outliner that's compatible with Microsoft Word. When using the Series 3 you will quickly learn from the system of graphic displays and option list how easy the Series 3 is to use. And with Psion's unique Multitasking Operating System, as many of the facilities as you want can be used at the same time! Other features include an automatic phone dialer, world information, a time and personal management file, powerful graphics programming language (OPL/w) which will enable you to write your own applications and two expansion ports for plug in SSD devices for unlimited memory and software.

Model Series 3  
#1763861

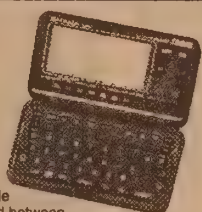


**\$299**

## SHARP 128KB BUSINESS ORGANIZER w/WIDE SCREEN DISPLAY

In today's world, it's sometimes hard to keep track of where you've been, who you've seen, and where you're going, but now it's as easy as saying "S.H.A.R.P.!" With this deluxe business organizer, you can store approximately 2,470 names and numbers or 1,740 schedule appointments (128K), but that's just the beginning, the unit's internal memory can be allocated between 10 major built-in functions: An integrated schedule and to do list with 3 different calendar views, 3 phone/address books, business card file, memo pad, outliner, home and world time clocks, and a calculator. You can send/receive electronic mail using built-in terminal emulation software and an optional PC modem, as well as, exchange data with your PC or Mac using an optional PC interface software and cable package. A must for any business person on-the-go at only...

MODEL YO-610 #1753444



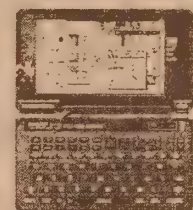
**\$199<sup>95</sup>**

## SHARP 512K PERSONAL ORGANIZER

### w/TOUCH SCREEN TECHNOLOGY

This Sharp Wizard lets you leave your portable computer at home but puts the power of that computer in your pocket! Here's a small sampling of the innovative features. Touch screen technology which allows you to write or draw on the screen using the Wizard pen, filter which organizes related data into folders that can be transferred to another touch screen Wizard via infrared, and a true word processor with a large screen display and a keyboard that's 75% the size of a standard PC keyboard. The possibilities are endless at only...

Model OZ-9600 II  
#1797152

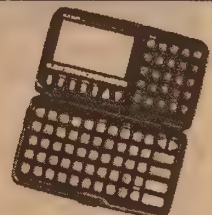


**\$499**

## CASIO 32K DIGITAL DIARY

Why carry around a calendar and schedule book, or a telephone directory and notebook, when you can do it all and more with this new digital diary from Casio. Optional PC and Mac links also available.

MODEL  
SF-4300  
#1647189



**\$49<sup>95</sup>**

## CASIO B.O.S.S. w/64KB MEMORY

This business organizer scheduling system comes packed with powerful functions that are practical and easy to use. The QWERTY Keyboard, telephone directory, calendar, memo function, schedule alarm, world time function, home time function, and schedule keeper will prove to be an invaluable tool in keeping your busy days in order.

An excellent investment at...

MODEL  
SF-5300  
#1671137



**\$89<sup>95</sup>**

## hp HEWLETT PACKARD Authorized Dealer

### 1MB PALMTOP COMPUTER

#### w/80 x 25 FULL SCREEN MS-DOS 5.0

It's here! The smallest, lightest HP PC ever comes equipped with complete organizer software to manage your time, tasks and data, plus you can retrieve information instantly with a full range of built-in personal productivity tools. The pull-down menus and dialogue boxes make it simple to master the familiar commands, and the high-resolution display with zoom option is easy to read! With Lotus 1-2-3 built-in you will have full spreadsheet capability, including graphics and macros. Also includes CC-Mail built-in. Now only...

MODEL  
HP-100LX  
#1788150



**\$695**

### PCMCIA MEMORY CARDS FOR HP95/100LX & AT&T EO PERSONAL COMMUNICATOR

|                 |                          |
|-----------------|--------------------------|
| SIMPLE TECH 1MB | SRAM \$178 <sup>95</sup> |
| SUNDISK 5MB     | FLASH \$449              |
| SUNDISK 10MB    | FLASH \$749              |

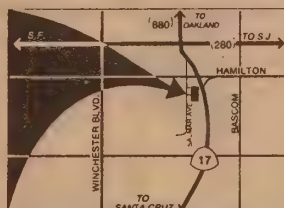
Home of Fast, Friendly,  
Courteous Service

# FRY'S ELECTRONICS

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

VISA AND  
MASTERCARD

**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



# FRY'S ELECTRONICS IS YOUR TEST AND MEASUREMENT HEADQUARTERS

**PLUS WE STOCK: TEST ACCESSORIES, METER CASES, PROBES, CRYSTALS, OSCILLATORS, RESISTORS, CAPS, EPROMS, PALS, PROGRAMMERS, UV ERASERS, SOLDERING EQUIPMENT, TTL LOGIC, DISCRETES, ELECTRONIC KITS, DATA BOOKS, TECHNICAL BOOKS PLUS MUCH MORE...**

## NEW FRANCHISE

### Tektronix 100MHz DIGITAL STORAGE OSCILLOSCOPE



With the introduction of the TDS 320, Tektronix redefines the low-cost digital oscilloscope. By sampling the signal at 5 times the analog bandwidth (500 megasamples per second on both channels simultaneously), you can be assured of true acquisitions, free from aliasing or other digital sampling effects. TDS 320 is the only scope in its class that can reliably acquire high speed transient or single-shot events to its full bandwidth. The TDS 320 has Dot, Dot Accumulate, Vector, and Vector Accumulate display modes—another advantage over the competition.

TDS 320  
#1823251

**\$2795**

## NEW FRANCHISE

### Tektronix 60MHz HANDHELD DIGITAL STORAGE OSCILLOSCOPE



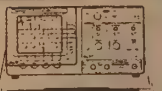
The Tektronix 224 scope provides unsurpassed power in the world of handheld oscilloscopes. Its sample rate is 10 MS/s for each channel, on RS-232C interface, and fully programmable. Internal batteries eliminate the need for external power. It is the first scope to be UL listed for line voltage measurements to 600 VAC, and are specified to withstand peak surges as high as 6 kV. The 224, because of its size, bandwidth, and portability, is a perfect tool for high speed electronics such as ATMs or avionics. The 224's exclusive TV trigger makes it just the thing for servicing medical imaging systems or closed circuit surveillance equipment.

224  
#1823114

**\$2750**

## NEW FRANCHISE

### Tektronix 100MHz ANALOG 2 CHANNEL OSCILLOSCOPE



The TAS 465 brings an advanced level of power and reliability to general purpose scopes. It brings leading edge innovation to low-cost analog scopes with comprehensive features. Comprehensive Video Triggering simplifies triggering on complex video waveforms. With line or field (odd, even, or both) composite video selections and positive or negative sync, you can cleanly trigger on any NTSC, PAL, or SECAM video signal. The scope's dual time base lets you zoom in on any portion of a waveform for closer examination. Auto Setup instantly delivers meaningful waveforms. Pressing the AUTOSET button automatically adjusts the horizontal, vertical, and triggering controls so that a stable signal is displayed.

TAS 465  
#1823505

**\$2195**

### FLUKE 87 4.5 DIGIT TRUE RMS DIGITAL MULTIMETER

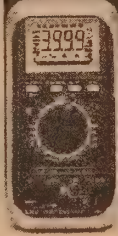


19,999 Count high resolution mode, plus 1ms Peak Min/Max Hold.  
• Min/Max/Average recording mode w/Min/Max alert  
• Frequency, Duty Cycle, and Cap Measurements  
• Back-lit display, touch hold, relative modes  
• Protective Holster with Flex stand  
• Made in USA  
• 3 Year Warranty

#1440238

**\$298**

### THE CHIEF ENGINEER ULTIMATE METER TRUE Rms - LCR - Hz - dBm 12 INSTRUMENTS IN ONE



• DC Volt Meter • Audible Continuity Tester  
• AC Volt Meter • Frequency Counter 20MHz  
• Ohm Meter • Capacitance Meter  
• DC Current • Inductance Meter  
• AC current • Logic Probe  
• Diode Tester • dBm  
• IOMEGA Ohm Impedance • Relative Mode • Data Hold  
Min/Max Average Memory Record • True Rms • Auto Sleep  
Power Off  
2 Year Warranty

S.M.S.

Model 104 #1776719

**\$249**

### UNIVERSAL 3 3/4 DI-LOG DIGITAL MULTIMETER



True RMS, 4000 count display analog bar graph, high resolution mode. Autoranging • Temp • Capacitance Frequency • Min/Max Recording Ruggedized and water resistant. Five year limited warranty. DL187T #1763506

universal  
UEI  
enterprises

**\$179<sup>95</sup>**

### Protek DC POWER SUPPLY



A high quality DC power supply featuring a unique owner savings design for cooler and more efficient operation. Two separate LED displays; green readout for voltage and red for current. Continuously variable with LED indicators signaling either constant voltage or constant current operational mode. Good Line, load regulation plus low ripple and noise makes this a fine compliment to any test bench.

DC OUTPUT  
30V @ 3A

3003  
#1693238

**\$249**

### BK PRECISION MAXTEC INTERNATIONAL CORP. 100MHz PORTABLE FREQUENCY COUNTER



5Hz to 100MHz Range • 8 Digit LED Display  
selectable 1.0 Sec/0.1 Sec Gate Times  
Low pass filter • Battery or AC Power  
Charger/AC adapter included  
BK-1803B  
#155339

**\$209**

### AMERICAN RELIANCE INC. 3.75 DIGIT DIGITAL MULTIMETER



w/AUTORANGING & 1 YEAR WARRANTY  
• True Rms AC • 20A Fused  
• Auto Data Hold • Frequency Counter  
• Sleep Mode • Capacitance  
• Min/Max Memories • Memory Read Function  
• Relative Mode • 0.3% Basic Acc.

AR-MODEL 37  
#1742369

FREE BOOT  
W/PURCHASE  
#1744648

**\$99<sup>95</sup>**

### AMERICAN RELIANCE INC. 3.5 DIGIT DIGITAL MULTIMETER



w/AUTORANGING & 1 YEAR WARRANTY  
Model 33 is a versatile digital multimeter with an impressive range of capabilities offered at an incredible price. This unit has data-hold functions and a basic accuracy of 0.5%, also audible continuity and fused 20A input.  
MODEL 33  
#1742347

FREE BOOT  
W/PURCHASE  
#1744648

**\$59<sup>95</sup>**

### SL WABER POWER CONDITIONER



If your equipment suffers from power problems, your company suffers too... SL Waber Has A Solution...

Studies show that over 95% of computer problems are due to brownouts, surges, and damage to circuitry resulting in over-heating, permanent damage, and loss of user time. Since the actual voltage level delivered to your equipment by the utility company may be higher or lower than what is required for safe operation, it's up to you to protect your equipment. Five models feature both undervoltage and overvoltage regulation and range from 300VA to 2400VA. Each model filters out unwanted noise and utilizes SL Waber's patented 3-stage surge suppression design consisting of metal oxide varistors, gas tube, and silicon avalanche diode; all providing protection against surges up to 72,025 amps!

also available  
MODEL PC-1800 \$224.95

**\$92<sup>95</sup>**

MODEL PC-300  
#1791465

### WAVE TRACKER™ NOISE AND SURGE FILTER



Waber's new "Wave Tracker" provides the ultimate in noise filtration and surge protection.

• Patented 3 Stage Protection (MOV, Gas Tube, Silicon Avalanche Diode)  
• Exceeds ANSI/IEEE C62.41-1980 (IEEE 587-1980)  
• Audible and Visual Surge Indicators  
• NEMA 5-15 Plug and Receptacles  
• Lifetime Warranty  
• Available in 4, 6 and 8 outlets  
WT4 #1791628

SL WABER

**\$52<sup>95</sup>**

Home of Fast, Friendly, Courteous Service

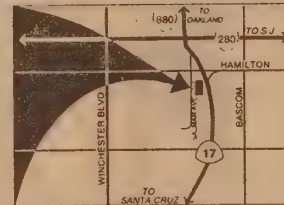
# FRY'S ELECTRONICS

Prices good thru October 11, 1993

Limit Rights Reserved Not Responsible For Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM

VISA AND  
MASTERCARD



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

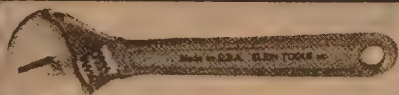
**FREMONT**  
440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**  
340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044

## CAMPBELL

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790





**12" KLEIN WRENCH  
WITH PLASTIC  
DIPPED  
HANDLES**



**\$22.99**

D-507-12  
#1774072

**SURFACE MOUNT  
BOARD 8 PIN  
GENERAL  
PURPOSE  
INDISCRETES**

.5 X .85  
#1746628

**\$2.19**

**MicroApps  
PERMANENT  
POWER  
PACK™**

**PREVENT PC FAILURE DUE  
TO A DEAD BATTERY**

Your PC will fail to boot up unless it contains the Patented Permanent Power Pack from MicroApps. Virtually all other PCs have a dying battery which causes real time Clock Failure and Loss of the System Configuration File. Thus, your PC will unpredictably fail to boot every few years. The lifetime guaranteed Permanent Power Pack eliminates the clock battery in IBM PC/AT and most compatibles. Never replace your PC battery again. IC controlled power management system makes your PC more reliable and carries a lifetime warranty. Model PPP-001 #1660638



**\$32.95**

**NEW MAC CABLE**

**Attention Macintosh Users! The Intelliview Adapter Connects A Variety of Monitors To The On-Board Video Of Apple's Latest Macs.**

• Works with hundreds of inexpensive PC multi-frequency monitors to mimic all of Apple's monitors up to 21" at 1152 x 870.  
• Allows easy switching between various resolutions to suit changing needs.



**\$27.99**

4691V  
#1800584



**ADJUSTABLE WRIST  
STRAP AND CLIP**

WITH 6 FT. CORD  
W-07924-2

**\$9.99**

**CONDUCTIVE  
FOAM**

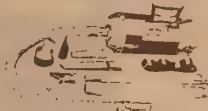
HIGH DENSITY  
1/4 X 12 X 12  
#1459702

**\$2.88**

**DATA-VAC/2**



Metro DATA-VAC/2 is a lightweight, high-powered, vacuum/blower that will maintain all office equipment. MDV-2C #1442780



**\$12.99**

**3M**

**FIRST TOUCH  
STATIC CONTROL  
COMPUTER PAD**

The unique layered construction not only creates a static-free environment, but also cushions your equipment, prevents slippage, and reduces noise. The pads come in both full system and keyboard sizes. 23.5" x 9.5" 10' Grounding Cord



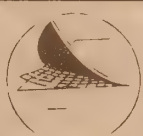
**\$34.99**

9210  
#143658

**3M**

**STATIC  
CONTROL  
TABLE MAT**

Dissipative 3-layer, 2' X 4' with ground cord and accessories



**\$79.99**

Color:  
Beige #1752546  
Grey #1752535  
Brown #1753020



**HIGH WATTAGE  
INTERNATIONAL  
ELECTRICITY  
CONVERTER TRAVEL SET**

Includes 1600 Converter for appliances from 50 to 1600 watts and four international wall adapter plugs. Travel pouch included. CA1600CS #66541



**\$18.99**

**MicroPoint  
Laser Pointer**

World's slimmest pointer utilizes a low profile laser, top quality optics and state-of-the-art miniaturized power. Circuit power 4.25m with wavelength 670nm. COME SEE OUR SELECTION #1819673

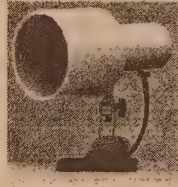
LYTE OPTRONICS

**\$18.99**

LITE SOURCE INC.

**CLIP-ON  
LITE**

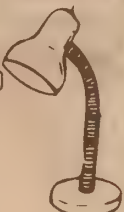
Flexible neck. Up to 60w (not included) Color: Ivory #1784950 • Teal #1784972 LS-112



**\$6.99**

**STUDENT DESK  
LAMP**

60 Watt (bulb not included) with Flexible Gooseneck LS-211 BLK. #1785021 RED #1785054 WHITE #1785032



LITE SOURCE INC.

**\$8.99**

HI-TECH CLEANER AND PROTECTOR  
**STATX**  
ANTI-STATIC FORMULA REPELS DUST

**HI-TECH  
CLEANER AND  
PROTECTOR**



**\$2.99**

81238  
#1731859

Reg. Price  
\$3.49

**HAKKO  
SOLDERING  
IRON 452**

15 Watt Solder Iron 370C 698F. Lightweight, Compact, Slender Handle and Ceramic Heater. N452JN-V12 #1556283



**\$19.99**

Reg. Price  
\$23.99

**SIX PIECE  
SLOTTED DRIVERS  
ELECTRONIC  
TOOL SET**



**\$18.99**

MODEL 260 90  
#1780093

**DREMEL®  
2750  
SINGLE  
SPEED  
MOTO TOOL KIT**



Long-life, lubricated bronze sleeve bearing motor provides steady power, smooth operation. 15 piece accessory/bit assortment Model 2750 #1740459

**\$49.95**

Home of Fast, Friendly,  
Courteous Service

**fry's ELECTRONICS**

Prices good thru  
October 11, 1993

Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
MON-FRI  
8AM-9PM  
SATURDAY  
9AM-8PM  
SUNDAY  
9AM-7PM



**CAMPBELL**

600 E. HAMILTON AVE.  
(408) 364-3700

CORPORATE P.O. FAX# (408) 364-3790

**SUNNYVALE**

1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**FREMONT**

440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**

340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



Continued from page 160

limited to 90- or 180-degree increments and you cannot get a direct overhead ("floor-plan") view.

You can choose three different sets of construction objects using simple icon-based menus: architecture, interiors, and living things. Architectural elements range from simple blocks to doors, walls, staircases, and complete (unfurnished) buildings.

Interior fixtures and furniture include everything you need for contemporary middle-class American bathrooms, bedrooms, kitchens, dining rooms, and living rooms. Living things include trees, animals, and people, constructed from rather simple blocky polyhedrons.

The basic method of KidCAD is to select a base object and then drag another object on top of it, where it snaps into place. The snap grid is displayed as dots (the program calls them "jacks"). Grid points seem to be scaled about one foot apart.

Building tools include Move, Copy, Rotate, Link, Unlink, Hide, and Show. The program follows a rigid hierarchy: when you perform an action on an object, it affects every other object attached to its top surface.

Since kids find buildings as much fun to demolish as to construct, KidCAD includes a variety of animated demolition tools: the Blob, the Laser, the Bomb, the Squasher, and the Dozer.

Initially, all objects are solid white wire-frame models with hidden-line removal. There are three sets of painting tools: solid colors, pattern fills, and "textures." The program claims to apply texture-mapping, but the implementation is quite crude. The textures are redrawn to scale when you zoom in or out, but they do not wrap around surfaces, and there is no shading. When objects are colored, there are occasional flaws in the hidden-line removal, so that (for example) the top of a supporting column may be visible through a floor.

After every action the entire scene is redrawn, which takes quite a while in a complex design, even on a fast machine. Many grown-up 3-D CAD programs let you turn off redraw until you want to examine your finished work. These are all forgivable design compromises, but the lack of a comprehensive Undo feature is not. It is much too easy to spoil a design by a single mistake, and much too hard to recover. You can only Undo a demolition, not any other action.

The program is installed from compressed files on three high-density disks and takes up about 9MB of hard disk space. The program can print the current screen; on an HP LaserJet III the output, nicely rendered in grayscale, was surprisingly fast. There is a good online Help system, and a well-designed and illustrated 30-page manual.

For kids (ages 7 and up) who dream of being architects, structural engineers, or interior designers, KidCAD will be a profoundly engaging and empowering tool. But anyone who is willing to spend a little time mastering the rather tricky user interface should be able to have fun with it. (Davidson and Associates, PO Box 2961, Torrance, CA 90509. Sales: 1-800-545-7677; Customer Support: 1-800-556-6141)

Graphics and  
Animation: 8  
Sound: 8  
User Interface: 7  
Overall Value: 8

## BRAND NAME TECHNOLOGY Lowest Prices

### LAPTOPS

#### TOSHIBA

##### T-1900

- 486SX-20
  - 4MB RAM
  - 120MB /200MB Hard Drive
- \$1849/2149**

##### T-4500C

- 486SX-20
  - Active Matrix Color Display
  - 4MB RAM
  - 120MB Hard Drive
- \$2995**

##### T-4600

- 486SL-33
  - 4MB RAM
  - 120MB /200MB Hard Drive
- \$2995/3250**

##### T-4600C

- 486SL-33
  - Active Matrix Color Display
  - 4MB RAM
  - 200MB Hard Drive
- \$4499**

**Bigger Hard Disks Available  
For All Laptop Models**

#### TM WIN SLC-25

- 486SLC-25
  - 4MB RAM
  - 80MB
- \$1549**

#### TM 4000 DX-25

- 486DX-25
  - 4MB RAM
  - 120MB /200MB Hard Drive
- \$1895/2050**

#### TM 4000 DX2-50

- 486DX2-50
  - 4MB RAM
  - 120MB Hard Drive
- \$2760**
- 8MB RAM /200MB Hard Drive
- \$3125**

#### TM 4000E

- 486DX2-50
  - Active Matrix Color Display
  - 4MB RAM
  - 200MB Hard Drive
- \$3999**

### DESKTOPS

#### 486SX-25SYSTEM

- 486SX-25
  - 2MB RAM
  - 85MB Hard Drive
  - SVGA Monitor & SVGA Card
  - 1.44 MB Floppy Drive
  - 2 Serial, 1 Parallel ports
  - 101 Keyboard
  - Mini-Tower Case
  - DOS, Windows, Microsoft Works & Mouse
- \$999**

#### 486SLC2-66 SYSTEM

- 486SLC2-66
  - 4MB RAM
  - 170MB Hard Drive
  - SVGA Monitor & SVGA Card
  - 1.44 MB Floppy Drive
  - 2 Serial, 1 Parallel ports
  - 101 Keyboard
  - Mini-Tower Case
  - DOS, Windows, Microsoft Works & Mouse
- \$1395**

#### 486SLC2-66 VLB SYSTEM

- 486SLC2-66
  - 4MB RAM
  - 170MB Hard Drive
  - SVGA Monitor & VLB Windows Accelerator Card
  - VLB IDE Interface
  - 1.44 MB Floppy Drive
  - 2 Serial, 1 Parallel ports
  - 101 Keyboard
  - Mini-Tower Case
  - DOS, Windows, Microsoft Works & Mouse
- \$1595**

### PRINTERS/MISC.

|                               |       |
|-------------------------------|-------|
| HP LaserJet 4L .....          | \$699 |
| HP LaserJet 4 .....           | 1399  |
| HP DeskJet 500 .....          | 309   |
| Okilaser 400 .....            | 539   |
| Okidata 380 .....             | 239   |
| HP LaserJet SML .....         | 1049  |
| 14.4K Fax/Modem Int. ....     | 169   |
| Panasonic Printers .....      | CALL  |
| PS/2 Keyboards/Mouse .....    | 55/45 |
| Mustek 256 Gray Scanner ..... | \$149 |

**All Hard Disk Models and Memory  
CALL for Pricing**



# Monarch Computers

**(510)526-7741**

863-B San Pablo Ave.  
Albany, CA 94706

**Fax (510) 526-7859**

**Hours: M-F 9:30-6pm, Sat 10-5**

Prices subject to change without notice. Not responsible for typographic errors.

**Full Desktop & Copying Services Available**



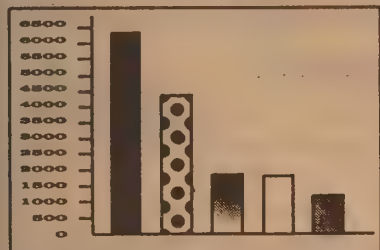
# Technoland

**We Do Business Your Way!**

**(408) 992-0888**

## Increase Your Hard Drive Speed By 500% with Portwell VLB Accelerator

System Specifications  
Core Test Ver. 2.92  
UMC Chip set: Intel 486DX/50MHz motherboard  
Maxtor 7345AT 340MB IDE Disk Drive



- ISA-IDE with Portwell Accelerator
- Promise PCC20230(spd2,turbo)
- Appian ADI2
- Promise ISA w/1MB Cache
- ISA-IDE w/o Portwell Accelerator

### Portwell VLB IDE Accelerator

**Faster than any VESA LB IDE controller card on the market!**

The Portwell Accelerator is a new, low-cost, fast transfer rate, high-performance interface board for VESA LB computer. The Portwell Accelerator only occupies VL-Bus MCA type slot and frees up the ISA AT slot for ISA Super IDE card. The hard disk transfer rate can be increased by as much as five times over standard Super IDE card without Portwell VLB Accelerator card.

#### Maximum Data Transfer Rate

\*9.0 MBytes/second

#### Host Bus Interface

- \* Fully VESA Local Bus compatible
- \* Register level compatible w/WD-1003 controllers
- \* Maximum bus speed up to 80486DX/50MHz

#### Disk Interface

- \* Support two IDE hard drives
- \* Fully compatible w/ATA Rev. 3.0 specification

#### Compatibility and Installation

- \* WD-1003 mode works with all operating systems
- \* Plug and Use, enhance any non-intelligent IDE controller without reformatting the disk drive

Introductory Price

**\$49**

**Dealer Wanted!**

Please Call: 1-408-730-9288

## Voice+Fax+Data

### Portwell Voice Fax/Modem 96/24

Portwell all-in-one voice messaging, fax, and modem communication system has all the capabilities of a stand-alone fax machine, telephone answering machine, data modem, and much more.

- Auto Detection of voice/fax/modem
- Background Sending/Receiving
- Real-Time Viewing of Fax Messages
- Caller ID Detection
- Remote Greeting Update
- Message Playback w/Password
- Message Forwarding
- Message/Fax Broadcasting
- Schedule Transmissions Voice/Fax
- Automatic Busy Redial
- Text Editor & Graphic Editor
- Multiple Telephone Book Management
- Multiple File Formats Support
- Mouse Support
- Image Scanner Control
- Mail Merge

**Complete Solution!**

Introductory Price: **\$128**  
List Price: \$199

**Dealer Wanted!**

Please call: 1-408-730-9288

## IDE & SCSI CONTROLLERS

|                                         |      |
|-----------------------------------------|------|
| IDE 2HD/2FD.....                        | \$14 |
| IDE 2HD/2FD W/S, 1P, 1G .....           | 18   |
| IDE VLB W/2S, 1P, 1G .....              | 55   |
| TECO DC-680 IDE VLB CACHE 4HD/2FD ..... | 190  |
| TECO DC-620 EISA CACHE 4HD/2FD .....    | 190  |
| ADAPTEC 1542C SCSI BUS MASTER .....     | 195  |
| ADAPTEC 1742 EISA SCSI 32 BIT .....     | 415  |
| FUTURE DOMAIN SCSI 16-BIT .....         | 65   |
| ULTRASTOR 14F 10MB/SEC .....            | 192  |
| ULTRASTOR 34F VLB .....                 | 279  |

## IDE HARD DRIVE SPECIAL!

|                                           |       |
|-------------------------------------------|-------|
| 40 MB SEAGATE ST-351 .....                | \$128 |
| 80 MB CONNER CP30084/MAXTOR 7080A .....   | 164   |
| 120 MB CONNER CP30104H/MAXTOR 7120A ..... | 178   |
| 170 MB CONNER CP30174E .....              | 188   |
| 200 MB CONNER CP30204/MAXTOR 7213A .....  | 228   |
| 250 MB CONNER CP30254/MAXTOR 724A .....   | 255   |
| 340 MB MAXTOR 7345A .....                 | 315   |
| 540 MB CONNER CP3544/MAXTOR LXT535A ..... | 668   |

SCSI & LARGER CAPACITY HARD DRIVES ARE ALSO AVAILABLE

## AUTOMATIC LASER-SAFE PRINT SHARING ADAPTERS

- Flexible Wiring Transmission-Bus, Tree, Ring, Star, etc.
- High Speed Transmission, up to 10,000 Characters/Second
- Transmission Distance Up To 1,300
- Uses a Simple 6-wire Telephone Cable, No Power Required.

### GT-100 SERIES

|                                                 |       |
|-------------------------------------------------|-------|
| Up To 40 Computers Share 1 Printer              |       |
| GT-100SK: Starter Kit (Two Com. 1 Printer ..... | \$125 |
| GT-100T: Transmitter w/25 Foot Cable .....      | 49    |
| GT-100P: Receiver w/25 Foot Cable .....         | 49    |

### GT-400 SERIES

|                                                  |       |
|--------------------------------------------------|-------|
| Up To 40 Computers Share Up To 4 Printers        |       |
| DOS 5.0 & Windows 3.X Compatible                 |       |
| GT-400SK: Starter Kit (Two Com. 1 Printer) ..... | \$175 |
| GT-400T: Transmitter w/20 Foot Cable .....       | 79    |
| GT-400P: Receiver w/20 Foot Cable .....          | 79    |



## HUGE SELECTION OF CD TITLES IN STOCK!

\*ATLAS \*GRAPHIC \*SOUND, MUSIC  
\*EDUCATION \*REFERENCE \*FAMILY APPLICATION

| *GAMES                    | *SHAREWARE | *ENTERTAINMENTS          | *ADULT |
|---------------------------|------------|--------------------------|--------|
| Beauty & The Beast        | \$21       | KGB World Fact Book      | \$32   |
| Barney Bear Goes to Space | \$21       | King's Quest V           | \$23   |
| Chessmaster 300 MPC       | \$23       | Loom                     | \$23   |
| Carmen San Diego-Deluxe   | \$33       | Mixedup Mother Goose     | \$21   |
| Desert Storm              | \$23       | Monkey Island            | \$24   |
| Dinosaur Adventure        | \$24       | Nat'l Geographic Mammals | \$27   |
| Family Choice             | \$27       | National Parks           | \$27   |
| Game Master               | \$21       | Peter and The Wolf       | \$23   |
| Great Cities-Vol 1 or 2   | \$26       | U.S. Atlas               | \$21   |
| Jones In The Fast Lane    | \$23       | World Atlas              | \$21   |

|                                                 |       |
|-------------------------------------------------|-------|
| MITSUMI CD-ROM with Interface card .....        | \$185 |
| NEC 84XT SCSI 280ms 300KB .....                 | \$415 |
| TOSHIBA 3401B SCSI 200ms 330KB .....            | \$425 |
| SONY 31A W/Controller Card .....                | \$215 |
| PANASONIC CR522 W/Audio Card & Controller ..... | \$215 |
| MIDILAND PP12 SHIELDED SPEAKERS - 20 Watt ..... | \$ 69 |
| HEAVY DUTY SHIELDED SPEAKERS - 80Watt .....     | \$ 79 |
| LIGHT WEIGHT HEADPHONES W/EXTENSION CORD ..     | \$ 15 |

## VGA on Television Special !

- \* Supports Both PC and MAC(optional)
- \* Supports All IBM Standard Modes up to 640x480 for NTSC and 800x600 for PAL
- \* Simultaneous Graphics Display on Both VGA and TV Monitor.
- \* Input: VGA DB-15 Pin Connector
- \* Output: Composite Video, S-Video, RGB Video(51KHz) & VGA RGB(31KHz)
- \* Flicker Filter Built-in
- \* TSR display adjustment for DOS & Windows 3.x
- \* No Special Driver Needed!

ONLY \$245

List Price \$449

### -AVerkey

**- ACT NOW! - FREE!**  
And Receive an Award Winning Presentation Software Program

Macromedia Action! 2.5 SE with Every AVerkey Purchased

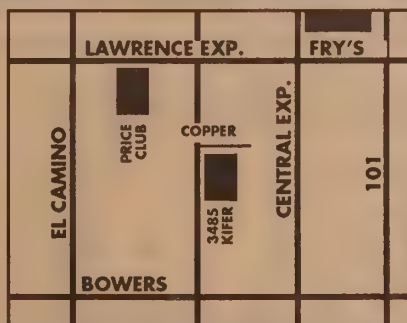


**No** Surcharges for Credit Card Purchases

**No** Annoying Voice Mail Answering Machines

**Yes** We Gladly Accept P.O.'s From CVorp., Educ. and Government Accounts

**Yes** We Will MEET or BEAT ANY ADVERTISED PRICE!



## COME SEE OUR SHOWROOM!

1 Block Away From Price Club At The Intersection of Kifer and Copper  
**3485 KIFER ROAD SANTA CLARA, CA 95051**

**TEL: (408) 992-0888**



**FAX: (408) 992-0808**



**MON-FRI 9 AM-6 PM/SAT 10 AM-5 PM**

Prices subject to change w/o notice, not responsible for typographic errors



# BUY DIRECT FROM FACTORY & SAVE

Pixel USA Computer (408) 929-7218

## MOTHERBOARD w/CPU

### ISA Bus

|                               |       |
|-------------------------------|-------|
| • 386SX-40MHz w/ 16Kb .....   | \$98  |
| • 386DX-40MHz w/ 128Kb .....  | \$118 |
| • 486SX-25MHz w/ 128Kb .....  | \$168 |
| • 486DX-33MHz w/ 128Kb .....  | \$138 |
| • 486DX-40MHz w/ 128Kb .....  | \$178 |
| • 486DX-33MHz w/ 128Kb .....  | \$358 |
| • 486DX-50MHz w/ 128Kb .....  | \$508 |
| • 486DX2-66MHz w/ 128Kb ..... | \$558 |

### VESA Local Bus

|                                                        |        |
|--------------------------------------------------------|--------|
| • Opti 386DX-40MHz w/ 128Kb .....                      | \$148  |
| • 486SX-25MHz w/ 128Kb .....                           | \$178  |
| • 486SX-33MHz w/ 128Kb .....                           | \$248  |
| • Opti 486DX-33MHz w/ 128Kb .....                      | \$168  |
| • Opti 486DX-40MHz w/ 128Kb .....                      | \$208  |
| • 486DX-33MHz w/ 128Kb .....                           | \$358  |
| • 486DX2-50MHz w/ 128Kb .....                          | \$428  |
| • 486DX-50MHz w/ 128Kb .....                           | \$508  |
| • 486DX2-66MHz w/ 128Kb .....                          | \$568  |
| • IBM 486SLC2-50MHz w/ 64Kb .....                      | \$288  |
| • IBM 486SLC2-66MHz w/ 64Kb .....                      | \$343  |
| • SIS 486SX-25MHz w/ 256Kb (ZIF Socket) .....          | \$228  |
| • SIS 486SX-33MHz w/ 256Kb (ZIF Socket) .....          | \$298  |
| • SIS 486DX-33MHz w/ 256Kb (ZIF Socket) .....          | \$428  |
| • SIS 486DX2-50MHz w/ 256Kb (ZIF Socket) .....         | \$488  |
| • SIS 486DX-50MHz w/ 256Kb (ZIF Socket) .....          | \$568  |
| • SIS 486DX2-66MHz w/ 256Kb (ZIF Socket) .....         | \$638  |
| • Orchid Super-Board 486DX-33MHz w/ 256Kb .....        | \$428  |
| • Orchid Super-Board 486DX2-50MHz w/ 256Kb .....       | \$488  |
| • Orchid Super-Board 486DX2-66MHz w/ 256Kb .....       | \$638  |
| • AMI Super Voyager 486DX-33MHz w/ 256Kb .....         | \$688  |
| • AMI Super Voyager 486DX-50MHz w/ 256Kb .....         | \$828  |
| • AMI Super Voyager 486DX2-66MHz w/ 256Kb .....        | \$898  |
| • AMI Enterprise III EISA VLB 486DX-33 w/ 256Kb .....  | \$848  |
| • AMI Enterprise III EISA VLB 486DX-50 w/ 256Kb .....  | \$998  |
| • AMI Enterprise III EISA VLB 486DX2-66 w/ 256Kb ..... | \$1048 |
| • Hint EISA VLB 486DX-33MHz w/ 256Kb .....             | \$468  |
| • Hint EISA VLB 486DX-50MHz w/ 256Kb .....             | \$608  |
| • Hint EISA VLB 486DX2-66MHz w/ 256Kb .....            | \$678  |

## INTERFACE CARDS

|                                                        |       |
|--------------------------------------------------------|-------|
| • IDE 2HD, 2FD .....                                   | \$13  |
| • IDE w/ 4FD & 2HD (Support 2.88) .....                | \$28  |
| • IDE 2HD, 2FD, 2s, 1p, 1g .....                       | \$15  |
| • IDE VLB 2HD, 2FD, 2s, 1p, 1g .....                   | \$38  |
| • IDE VLB 2HD, 2FD, 2s, 1p, 1g (16,550 UART) .....     | \$55  |
| • IDE Orchid VLB 2HD, 2FD, 2s, 1p, 1g .....            | \$58  |
| • IDE DTC 2270 VLB 2HD, 2FD, 2s, 1p, 1g .....          | \$65  |
| • IDE Promise VLB 4030 Caching .....                   | \$138 |
| • SCSI DTC 3280a SCSI Controller (16-bit) .....        | \$98  |
| • SCSI DTC 3270 VLB Controller (32-bit) .....          | \$118 |
| • SCSI Adaptec 1542CK w/ Kit Controller (16-bit) ..... | \$240 |
| • SCSI UltraStor VLB 34F Controller (32-bit) .....     | \$268 |
| • SCSI Bus Logic VLB KT-445S Controller (32-bit) ..... | \$280 |
| • SCSI Adaptec 2742 EISA Controller (32-bit) .....     | \$388 |
| • SCSI DTC 3290 EISA Controller (32-bit) .....         | \$388 |



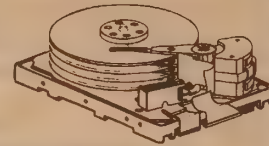
## MONITORS

|                                                      |        |
|------------------------------------------------------|--------|
| • 14" (1024x768) .39 Interlaced .....                | \$185  |
| • 14" (1024x768) .28 Interlaced .....                | \$243  |
| • 14" (1024x768) .28 Non-Interlaced .....            | \$263  |
| • 14" Acer (1024x768) .28 Non-Interlaced (34T) ..... | \$298  |
| • 14" ViewSonic 6E (1024x768) .28 NI (60Hz) .....    | \$298  |
| • 14" Sampo KDM-1466 (1024x768) .28 NI (70Hz) .....  | \$338  |
| • 14" ADI 3G (1280x1024) .28 NI .....                | \$338  |
| • 14" Sony 1340S (1024x768) .25 NI (70Hz) .....      | \$580  |
| • 15" Mitac (1280x1024) .28 NI .....                 | \$398  |
| • 15" ADI 4G (1280x1024) .28 NI .....                | \$428  |
| • 15" ADI 4G (1024x768) .28 NI (Low Radiation) ..... | \$468  |
| • 15" SAMPD KDM-1566 (1280x1024) .28 NI .....        | \$428  |
| • 15" MAG 15F (1024x768) .28 NI .....                | \$513  |
| • 15" ViewSonic 15" (1280x1024) .28 NI .....         | \$528  |
| • 15" NEC 3FGE (1024x768) .28 NI (60Hz) .....        | \$598  |
| • 15" NEC 4FGE (1024x768) .28 NI (72Hz) .....        | \$698  |
| • 17" SAMPD KDM-1766 (1280x1024) .31 NI .....        | \$698  |
| • 17" ADI Low Radiation (1280x1024) .26 NI .....     | \$898  |
| • 17" ViewSonic 7 (1280x1024) .28 NI .....           | \$898  |
| • 17" Nanao F550iw (1280x1024) .28 NI .....          | \$1098 |

## SVGA CARD

|                                                       |        |
|-------------------------------------------------------|--------|
| • MGP Card .....                                      | \$15   |
| • Super VGA Card w/ 512Kb .....                       | \$34   |
| • Windows Accelerator w/ 1Mb (Cirrus Logic) .....     | \$54   |
| • Sigma Design TsengLab ET-4000 Hi-Color w/ 1Mb ..... | \$78   |
| • Windows Accelerator VLB w/ 1Mb (Cirrus Logic) ..... | \$78   |
| • Windows Accelerator VLB w/ 1Mb (ET-4000) .....      | \$95   |
| • Genoa 8500 Windows Accelerator VLB w/ 1Mb .....     | \$95   |
| • Spider Windows Accelerator VLB w/ 1Mb .....         | \$95   |
| • Spider+ Windows Accelerator VLB w/ 1Mb .....        | \$120  |
| • Spider Black Widow VLB w/ 1Mb .....                 | \$215  |
| • Spider Black Widow VLB w/ 2Mb .....                 | \$268  |
| • Orchid Fahrenheit 1280 Vram w/ 1Mb .....            | \$118  |
| • Orchid Fahrenheit 1280 VLB w/ 1Mb .....             | \$148  |
| • Orchid Fahrenheit VA 1280 VLB w/ 1Mb .....          | \$208  |
| • Orchid Celsius VLB w/ 2Mb .....                     | \$268  |
| • Orchid P9000 VLB w/ 3Mb .....                       | \$348  |
| • Diamond Speed Star Pro VLB w/ 1Mb .....             | \$118  |
| • Diamond Stealth 24 VLB w/ 1Mb .....                 | \$148  |
| • Diamond Stealth Pro VRAM w/ 1Mb .....               | \$248  |
| • Diamond Stealth Pro VRAM w/ 2Mb .....               | \$318  |
| • Diamond Viper VLB w/ 2Mb .....                      | \$378  |
| • ATI Graphic Ultra Pro VLB w/ 2Mb .....              | \$325  |
| • Other .....                                         | \$Call |

## HARD DISK & FLOPPY DRIVE



### Western Digital

|                                        |               |
|----------------------------------------|---------------|
| • 213MB IDE 14ms (Caviar WD1210) ..... | \$198         |
| • 255MB IDE 13ms (Caviar WD2250) ..... | \$218         |
| • 340MB IDE 12ms (Caviar WD2340) ..... | \$278         |
| • 420MB IDE 12ms (Caviar WD2420) ..... | \$388         |
| • 540MB IDE 12ms (Caviar WD2540) ..... | \$Coming Soon |

### Maxtor

|                                             |        |
|---------------------------------------------|--------|
| • 130MB IDE 15ms (Maxtor 7120A) .....       | \$158  |
| • 213MB IDE 15ms (Maxtor 7213A) .....       | \$208  |
| • 245MB IDE 15ms (Maxtor 7245A) .....       | \$228  |
| • 340MB IDE 14ms (Maxtor 7345A) .....       | \$288  |
| • 540Mb IDE 8.5ms (Maxtor MXT-540A) .....   | \$738  |
| • 340Mb SCSI 14ms (Maxtor 7345s) .....      | \$358  |
| • 540MB SCSI 8.5ms (Maxtor MXT-540s) .....  | \$738  |
| • 1.2Gb SCSI 13ms (Maxtor PD-12s) .....     | \$888  |
| • 1.2Gb SCSI 8.5ms (Maxtor MXT-1240s) ..... | \$1168 |
| • 1.7Gb SCSI 13ms (Maxtor P1-17s) .....     | \$1128 |

### Quantum

|                                                   |       |
|---------------------------------------------------|-------|
| • 245MB IDE 16ms 256Kb Cache (LPS240A) .....      | \$228 |
| • 245MB SCSI 16ms 256Kb Cache (LPS240s) .....     | \$248 |
| • 525MB SCSI-II <10ms 256Kb Cache (LPS525) .....  | \$588 |
| • 700MB SCSI-II <10ms 256Kb Cache (PD700) .....   | \$768 |
| • 1.0GB SCSI-II <10ms 256Kb Cache (PD1050s) ..... | \$918 |
| • 1.2Gb SCSI-II <10ms 512Kb Cache (PD1225S) ..... | \$988 |

### Fujitsu

|                                               |        |
|-----------------------------------------------|--------|
| • 520MB 12ms IDE (M2624T) 3.5" .....          | \$628  |
| • 520MB 12ms SCSI-II (M2624FA) 3.5" .....     | \$628  |
| • 1.2GB 10ms SCSI-II (M2694SA) 3.5" .....     | \$988  |
| • 2.4GB 12ms SCSI-II (M2654SA) 5.25" FH ..... | \$1848 |

### Conner

|                                   |       |
|-----------------------------------|-------|
| • 170MB IDE 17ms (CP30174E) ..... | \$175 |
| • 212MB IDE 12ms (CP30204) .....  | \$218 |
| • 250MB IDE 14ms (CP30254) .....  | \$228 |
| • 540MB IDE 10ms (CP30544) .....  | \$598 |
| • 540MB SCSI 12ms (CP3540) .....  | \$638 |

### Toshiba

|                                      |        |
|--------------------------------------|--------|
| • 877Mb SCSI-II 12ms (MK438FB) ..... | \$748  |
| • 1.0GB SCSI-II 12ms (MK537FB) ..... | \$828  |
| • 1.2GB SCSI-II 11ms (MK538FB) ..... | \$938  |
| • Other .....                        | \$Call |

### Teac

|                                               |       |
|-----------------------------------------------|-------|
| • 1.2Mb Floppy Drive (TEAC) .....             | \$45  |
| • 1.44Mb Floppy Drive (TEAC) w/ Bracket ..... | \$45  |
| • 2.88Mb Floppy Drive (Toshiba) .....         | \$65  |
| • 1.2Mb and 1.44Mb Combo (TEAC) .....         | \$118 |

## CD ROM Drives & Software

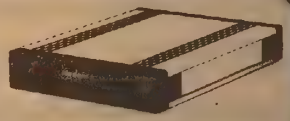
|                                                  |       |
|--------------------------------------------------|-------|
| • Mitsumi CD-ROM w/ Controller (350ms) .....     | \$178 |
| • PanaSonic CD-ROM w/ Controller (390ms) .....   | \$208 |
| • TEXEL DM-3024 SCSI internal (265ms) .....      | \$348 |
| • NEC CD-R-84-1 SCSI-ii internal (280ms) .....   | \$445 |
| • Toshiba XM-3401B SCSI 256K Cache (200ms) ..... | \$398 |

## KEYBOARDS



|                                                 |      |
|-------------------------------------------------|------|
| • Keyboard 101 Enhanced .....                   | \$15 |
| • Keyboard 101 Keytronic .....                  | \$28 |
| • Keyboard 101 Enhanced Click (NTC) .....       | \$25 |
| • Keyboard 101 Enhanced Click (NMB) .....       | \$45 |
| • Keyboard Focus 9000 CLick w/ Calculator ..... | \$65 |
| • Keyboard 101 w/ TrackBall (Qtronic) .....     | \$65 |
| • Keyboard Ultra (NorthGate) .....              | \$95 |

## MODEMS



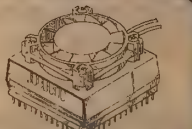
|                                                      |       |
|------------------------------------------------------|-------|
| • Modem-2400 & Fax 9600 .....                        | \$45  |
| • GVC Modem 14,400 & Fax 14,400 ( Internal ) .....   | \$138 |
| • GVC Modem 14,400 & Fax 14,400 (external) .....     | \$158 |
| • US Robotics Sporter 14,400 (Modem & Fax) Int. .... | \$168 |
| • US Robotics Sporter 14,400 (Modem & Fax) Ext. .... | \$188 |

## 3 Buttons Mouse Serial \$895

### MICE

|                                                    |      |
|----------------------------------------------------|------|
| • Logitech 2 Buttons Mouse (High Resolution) ..... | \$12 |
| • Logitech Mouse Man Serial .....                  | \$38 |
| • Logitech Mouse Man Bus .....                     | \$55 |
| • Logitech Portable Serial Mouse .....             | \$45 |
| • Real Microsoft Serial Mouse (New Model) .....    | \$40 |
| • Real Microsoft Bus Mouse .....                   | \$68 |

## ACCESSORIES



|                                              |        |
|----------------------------------------------|--------|
| • Cpu cooling kit w/ heatsink & fan .....    | \$15   |
| • Full Version MS-DOS 6.0 (w/ System) .....  | \$38   |
| • Full Version Windows 3.1 (w/ System) ..... | \$38   |
| • Math Coprocessor 387-40MHz .....           | \$48   |
| • Panasonic 1123 Printer .....               | \$178  |
| • Panasonic 2123 Printer .....               | \$238  |
| • Color Option Kit .....                     | \$48   |
| • CD Caddy .....                             | \$4.45 |
| • Printer Stand .....                        | \$2.95 |

### Case

|                                                  |        |
|--------------------------------------------------|--------|
| • Mini Desktop Case + Power Supply 230W .....    | \$50   |
| • Mini Tower Case + Power Supply 230W .....      | \$45   |
| • Medium Tower Case + Power Supply 230W .....    | \$75   |
| • Full Size Tower Case + Power Supply 250W ..... | \$98   |
| • Black Tower (All Model) .....                  | \$Call |

### Tape Backup

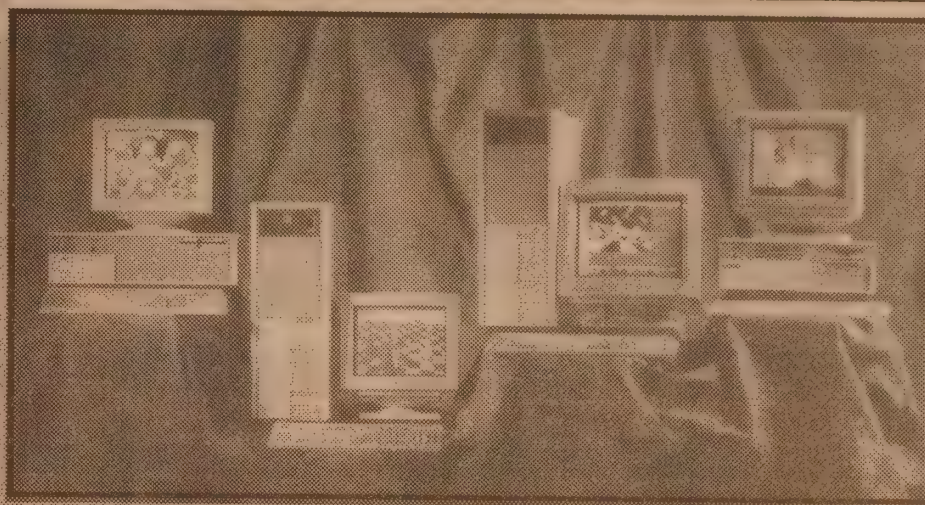
|                                     |       |
|-------------------------------------|-------|
| • Colorado 120Mb Tape Back-up ..... | \$145 |
| • Colorado 250Mb Tape Back-up ..... | \$178 |

### Sound Card

|                                                        |       |
|--------------------------------------------------------|-------|
| • Sound Blaster Deluxe .....                           | \$88  |
| • Sound Blaster Pro Deluxe .....                       | \$125 |
| • Sound Blaster 16 .....                               | \$168 |
| • Sound Blaster 16 ASP .....                           | \$208 |
| • Media Vision Spectrum Pro 16 w/ SCSI Interface ..... | \$148 |



**We Will  
Beat Any  
Advertised  
Price\***



### AMI Super Voyager Vesa LB Systems

- ★ AMI Super Voyager w/ Intel CPU
- ★ 256KB Cache
- ★ 4Mb Ram installed expandable to 64Mb (70-pin)
- ★ IDE Controller 2HD & 2FD w/ 2s, 1p, 1g Port (High Speed on Serials Port)
- ★ Floppy Drive 1.2Mb & 1.44Mb
- ★ Hard Disk 130Mb IDE 15ms (Maxtor 7131A)
- ★ Orchid Fahrenheit 1280 VLB w/ 1Mb expandable to 2Mb
- ★ 14" Super VGA Color Monitor (1024x768) .28 Non-Interlaced
- ★ 101 Keys Enhanced Keyboard
- ★ Mini Tower Case w/ 230 Watts Power Supply
- ★ FREE Real Microsoft Mouse Serial

**486DX2-66 \$1828**

**486DX-50 \$1768**

**486DX2-50 \$1678**

**486DX-33 \$1618**

**486SX-33 \$1488**

**486SX-25 \$1408**

### ORCHID Super Board Vesa LB Systems

- ★ Orchid SuperBoard w/ Intel CPU
- ★ 256KB Cache
- ★ 4Mb Ram installed expandable to 32Mb (30-pin)
- ★ IDE Controller 2HD & 2FD w/ 2s, 1p, 1g Port
- ★ Floppy Drive 1.2Mb & 1.44Mb
- ★ Hard Disk 130Mb IDE 15ms (Maxtor 7131A)
- ★ Orchid Fahrenheit 1280 VLB w/ 1Mb expandable to 2Mb
- ★ 14" Super VGA Color Monitor (1024x768) .28 Non-Interlaced
- ★ 101 Keys Enhanced Keyboard
- ★ Mini Tower Case w/ 230 Watts Power Supply
- ★ FREE Real Microsoft Mouse Serial

**486DX2-66 \$1558**

**486DX-50 \$1498**

**486DX2-50 \$1418**

**486DX-33 \$1358**

**486SX-33 \$1228**

**486SX-25 \$1158**

### PIXEL 486 Series Vesa LB Systems

- ★ Mother-Board w/ CPU
- ★ 128K Cache Expandable to 256Kb
- ★ 4Mb Ram installed expandable to 32Mb
- ★ IDE Controller 2HD & 2FD w/ 2s, 1p, 1g Port
- ★ Floppy Drive 1.2Mb & 1.44Mb
- ★ Hard Disk 130Mb IDE 15ms (Maxtor 7131A)
- ★ Windows Accelerator VLB w/ 1MB (32-bit)
- ★ 14" Super VGA Color Monitor (1024x768)
- ★ 101 Keys Enhanced Keyboard
- ★ Mini Tower Case w/ 230 Watts Power Supply
- ★ FREE Real Microsoft Mouse Serial

**Intel 486DX2-66 \$1378**

**Intel 486DX-50 \$1328**

**Intel 486DX-33 \$1168**

**Cyrix 486DLC33 \$948**

**Intel 486SX-25 \$978**

**AMD 386DX-40 \$938**

### PIXEL 486 & 386 ISA Bus Systems

- ★ MotherBoard w/ CPU
- ★ 128K Cache Expandable to 256Kb
- ★ 4Mb Ram installed expandable to 32Mb
- ★ IDE Controller 2HD & 2FD w/ 2s, 1p, 1g Port
- ★ Floppy Drive 1.2Mb & 1.44Mb
- ★ Hard Disk 130Mb IDE 15ms (Maxtor 7131A)
- ★ Trident 9000 Super VGA Card 512KB (16-bit)
- ★ 14" Super VGA Color Monitor (1024x768)
- ★ 101 Keys Enhanced Keyboard
- ★ Mini Tower Case w/ 230 Watts Power Supply
- ★ FREE Real Microsoft Mouse Serial

**Intel 486DX2-66 \$1328**

**Intel 486DX-50 \$1278**

**Intel 486DX-33 \$1128**

**Cyrix 486DLC33 \$888**

**Intel 486SX-25 \$928**

**AMD 386DX-40 \$868**

**One Year Warranty  
Parts & Labor On  
Systems**

- ☐ Customize Configuration Available
- ☐ Financing Available
- ☐ 24 Hours Turn-Around Time On Service
- ☐ All Systems Are Burned-In and Tested for 72 Hours

Office Hours: Mon - Fri : 9:30 am - 7:00 pm · Sat.: 10:00 am - 6:00 pm  
Price, term, availability subject to change without notice. Not responsible for typos. Some restriction apply\*

**Call Pixel USA BBS, 929-6981, 8N1, 4 lines, FREE access.**

**1937 Tully Road • San Jose, CA 95122**

**(408) 929-7218**

Fax: (408) 929-7244



**PIXEL USA**

**SAVE  
3%  
ON CASH  
PURCHASE**



## THE COMPUTER AND NETWORK SPECIALISTS

PC Professional, Inc.

Sales • Service • Training • Hardware • Software • Networks

We offer:

### SALES

- Computers & Laptops
- Printers & Monitors
- Network systems
- Modems & Faxes
- Scanners & Plotters
- Tape backups & CD ROMs
- Large Software selection

### SERVICE

- Consulting
- Design
- Integration
- Delivery & Installation
- Personalized training
- On-site & in-house training
- Warranty & non-warranty repair

### SUPPORT

- 4-8 hour response
- Loaners
- Phone support
- Authorized service dept.
- Full time tech. support
- 6 CNEs
- Service contracts

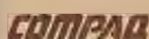


#### Macintosh Centris 650

25-MHz 68040 processor  
4MB RAM (expansion to 132MB)

\$ CALL

- MAC Classic
- MAC VX
- MAC Quadra
- MAC Powerbooks
- Newton MessagePad



#### Compaq Prosignia

Intel 33-MHz 486 microprocessor  
32-bit system memory (expansion to 128MB)

\$ CALL

- Prolinea
- Deskpro
- Systempro
- Contura



#### Dell 466/M

i486 DX2 "speed doubler" microprocessor  
running at 66/33 MHz  
4 MB RAM (expansion to 64MB)

\$ CALL

- Dell 486/L series
- Dell 486/T series
- Dell 486/ME series
- Dell notebook



#### Digital MT

Industry-standard i486 processors  
4MB RAM (expansion to 64MB)

\$ CALL

- Digital ST
- Digital LP
- Portables
- Pathworks



#### HP Vectra VL

33-MHz 486DX microprocessor  
4 MB RAM (expansion to 32MB)

\$ CALL

- HP Vectra 486U
- HP printers
- HP scanners

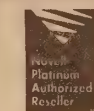


#### PS/Valuepoint 433DX

33MHz i486 DX microprocessor  
4 MB RAM or 8 MB RAM  
(expansion to 32MB)

\$ CALL

- PS/2
- Spacesaver
- Desktop
- Mini Tower
- Thinkpad



#### NetWare 3.11

5, 10, 20, 50, 100 & 250 user versions  
Connects all your computer resources

\$ CALL

- NetWare 4.0
- SAA
- NAS



#### StorageExpress XLE

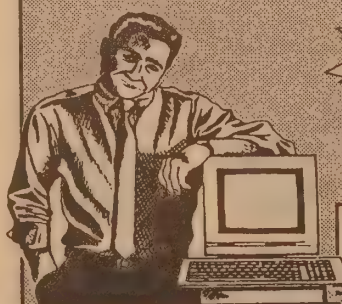
Network backup solution

\$ CALL

- StorageExpress XLD
- StorageExpress ELD
- LANDesk

Plus: AST, DTK, Epson, NEC, Okidata, Samsung, Toshiba and more

Serving the entire Bay Area for the past 12 years



THOUSANDS OF  
PRODUCTS AT  
LOW, LOW PRICES  
EVERYDAY!!

SPECIALS!!  
INCREDIBLE SAVINGS!!

The Full Service Source for All Your Computer Needs!

Call PC Professional today for a FREE consultation or brochure



PC Professional, Inc. (510) 465-5700  
1908 Webster St., Suite B, Oakland, 94612 Fax: (510) 465-8327

## PRINTER REVIEW

### PRIMERA COLOR PRINTER

Manufactured By: Fargo Electronics

List Price: \$995

Reviewed By: Woody Liswood

What would you think about a Color Wax Thermal Transfer printer for under \$1000? At \$995, the Fargo Primera printer is definitely a best buy in anyone's book.

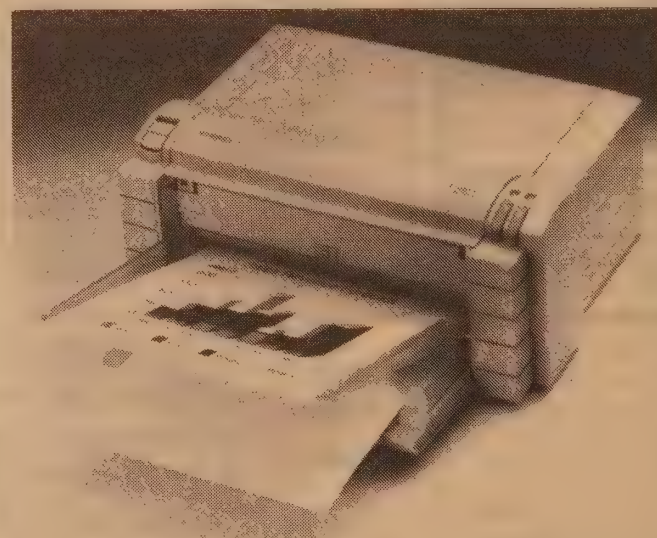
The Primera is speedy, but only under Windows 3.1. There are no MS-DOS or Macintosh drivers. In roughly 2.5 to three minutes, you can get a color print from any of your Windows applications. This test was done on a 486DX50 with 16MB of RAM. Slower CPU speeds will beget longer printing times.

Installation is rather easy. Unpack and plug in the printer. It is as easy to install the wax ribbon as it is to change a toner cartridge on an HP LJ II—place the wax ribbon into its holder and drop this into the printer. Next, open the Windows Control Panel and install the printer driver. There is nothing to do or set on the printer itself. The few controls you need are software selectable through the printer setup within Windows.

Now, there are a couple of other things you need to be aware of about the Primera printer. For one, this particular Fargo printer is bare bones. There is no onboard processing, no printer emulations, no megabytes of onboard RAM, and only a single font. Also, the resolution is only 203dpi.

Alignment and paper feeding are critical. The paper must go back and forth five times for the four-color ribbon. The first time lets the Primera find the top and

bottom of the paper. Then it goes back and forth for each color as it is added to the paper. In the about one hundred prints I did while testing this printer I did not have any paper jams. Since the possibility of paper jams always exists,



to help prevent jams the Primera documentation discusses fanning your paper and properly loading the fifty-sheet paper feed tray.

Color printing does get expensive: a three-color ribbon, good for 115 prints, costs \$45. An eighty-print, four-color ribbon is also \$45. Fargo's Standard Paper is \$56.50 for four reams, but I recommend the Premium paper for special presentations at \$75.50 for four reams. Transparency film, especially designed to work in the Primera printer, retails for \$34.95 for fifty sheets. (Fargo Electronics, Inc., 7901 Flying Cloud Dr., Eden Prairie, MN 55344. 612/941-9470)



# FREE DELIVERY & INSTALLATION

## On-Site Service Available • Satisfaction Guaranteed

### LIFETIME LABOR ON ALL SYSTEMS

#### 486DX-66 256K VESA LOCAL BUS 4MB RAM/200MB HD SVGA SYSTEM

- 4MB RAM/200MB Hard Drive
- Impression SVGA Monitor 1024 x 768 .28
- Trident SVGA Card w/1MB
- 1.2 & 1.44 Floppy Drives
- 101 Keyboard
- Serial Mouse

**\$1429**

#### 486DX-50 256K VESA LOCAL BUS 4MB RAM/200MB HD SVGA SYSTEM

- 4MB RAM/200MB Hard Drive
- Impression SVGA Monitor 1024 x 768 .28
- Trident SVGA Card w/1MB
- 1.2 & 1.44 Floppy Drives
- 101 Keyboard
- Serial Mouse

**\$1449**

#### 486DX-33 256K VESA LOCAL BUS 4MB RAM/200MB HD SVGA SYSTEM

- 4MB RAM/200MB Hard Drive
- Impression SVGA Monitor 1024 x 768 .28
- Trident SVGA Card w/1MB
- 1.2 & 1.44 Floppy Drives
- 101 Keyboard
- Serial Mouse

**\$1269**

#### 386DX-40 128K 4MB RAM/120MB HD SVGA SYSTEM

- 4MB RAM/120MB Hard Drive
- Impression SVGA Monitor 1024 x 768 .28
- Trident SVGA Card w/1MB
- 1.2 & 1.44 Floppy Drives
- 101 Keyboard
- Serial Mouse

**\$999**

### HARD DRIVES

|                  |       |
|------------------|-------|
| 80MB IDE .....   | \$160 |
| 120MB IDE .....  | 179   |
| 175MB IDE .....  | 189   |
| 200MB IDE .....  | 199   |
| 250MB IDE .....  | 235   |
| 340MB IDE .....  | 305   |
| 1.2GB SCSI ..... | 1245  |

### VGA CARDS

|                                 |      |
|---------------------------------|------|
| Oak 1MB SVGA Card .....         | \$49 |
| Trident SVGA 1MB .....          | 54   |
| Prodesigner IIs 1MB .....       | 130  |
| ATI Wonder VGA VL24 1MB .....   | 129  |
| ATI Ultra Plus 2MB .....        | 299  |
| Orchid Fahrenheit 1MB .....     | 147  |
| Orchid Fahrenheit VLB .....     | 180  |
| Paradise Windows Acc. 1MB ..... | 150  |



### WE NOW CARRY APPLE PRODUCTS

|                              |        |
|------------------------------|--------|
| PowerBook 145B 4/40 .....    | \$1289 |
| PowerBook 145B 4/80 .....    | 1499   |
| PowerBook 160 4/40 .....     | 1665   |
| PowerBook 160 4/80 .....     | 1765   |
| PowerBook 160 4/120 .....    | 2099   |
| PowerBook 165C 4/80 .....    | 2099   |
| PowerBook 165C 4/120 .....   | 2399   |
| Macintosh LCIII 4/80 .....   | 1199   |
| Macintosh LCIII 4/160 .....  | 1375   |
| Centris 610 4/80 .....       | 1279   |
| Centris 610 8/230 .....      | 1859   |
| Centris 650 8/230 .....      | 2157   |
| Centris 8/230 w/CD-ROM ..... | 2479   |

### MOTHERBOARDS MICRONICS

|                          |       |
|--------------------------|-------|
| 486DX-33 256K VLB .....  | \$685 |
| 486DX2-50 256K VLB ..... | 829   |
| 486DX2-66 256K VLB ..... | CALL  |

### MYLEX

|                         |       |
|-------------------------|-------|
| 486DX-33 128K VLB ..... | \$675 |
| 486DX-50 256K VLB ..... | CALL  |
| 486DX-66 256K VLB ..... | CALL  |



All AMI motherboards include  
built in IDE & floppy controller

|                         |       |
|-------------------------|-------|
| 486DX-33 256K VLB ..... | \$799 |
| 486DX-50 256K VLB ..... | 899   |
| 486DX-66 256K VLB ..... | 1099  |

### MONITORS

|                           |       |
|---------------------------|-------|
| Impression SVGA .39 ..... | \$199 |
| Impression SVGA .28 ..... | 245   |
| Touch SVGA .28 NI .....   | 275   |
| Viewsonic 1 .39 .....     | 239   |
| Viewsonic 4E .28 .....    | 295   |
| Viewsonic 6FS 15" .....   | 525   |
| Mitsubishi 20" .31 .....  | 899   |
| Viewsonic 7 17" .....     | 985   |
| NEC 3FG .....             | 615   |
| NEC 4FG .....             | 735   |
| NEC 5FG .....             | 1125  |
| NEC 6FG .....             | 2325  |
| Goldstar 15" .29 .....    | 469   |
| Goldstar 17" .31 .....    | 725   |
| Magnavox 20" .....        | 1299  |

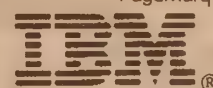
### BRAND NAMES

#### TOSHIBA

|                    |        |                    |      |
|--------------------|--------|--------------------|------|
| T1900 4/80 .....   | \$1659 | T4500 4/120 .....  | 2089 |
| T1900 4/120 .....  | 1789   | T4500C 4/120 ..... | 2959 |
| T1900C 4/120 ..... | 2399   | T4600 4/120 .....  | 2839 |
| T1900C 4/200 ..... | 2679   | T4600C 4/120 ..... | 4039 |
| T4400C 4/120 ..... | 3399   | T4600C 4/200 ..... | 4299 |

#### COMPAQ

|                                                 |      |                                                    |      |
|-------------------------------------------------|------|----------------------------------------------------|------|
| Prolinea bundled with DOS,<br>Windows, & Mouse! |      | Contura bundled with DOS,<br>Windows, & Trackball! |      |
| Prolinea 4/33 M120, Bundle .....                | 1385 | Contura 3/25 M84 .....                             | 1449 |
| Prolinea 4/33 M240, Bundle .....                | 1455 | Contura 3/25C M84 .....                            | 1979 |
| Prolinea 4/50 M120, Bundle .....                | 1730 | Contura 4/25, M120 .....                           | 1899 |
| Prolinea 4/50 M240, Bundle .....                | 1903 | Contura 4/25, M209 .....                           | 2199 |
| Prolinea 4/66 M120, Bundle .....                | 1903 | Contura 4/25C, M120 .....                          | 2554 |
| Prolinea 4/66 M240, Bundle .....                | 2025 | Contura 4/25C, M209 .....                          | 2875 |
|                                                 |      | Deskpro Models .....                               | CALL |
|                                                 |      | ProSignia Models .....                             | CALL |
|                                                 |      | PageMarq Printers .....                            | CALL |



|                           |        |                                                    |      |
|---------------------------|--------|----------------------------------------------------|------|
| ThinkPad 300 4/80 .....   | \$1769 | Value Point bundled with DOS,<br>Windows, & Mouse! |      |
| ThinkPad 300 4/120 .....  | 2049   | Value Point 486DX-33 4/120 .....                   | 1660 |
| ThinkPad 350 4/125 .....  | 1999   | Value Point 486DX-33 4/245 .....                   | 1750 |
| ThinkPad 350C 4/125 ..... | 2799   | Value Point 486DX2-66 4/245 .....                  | 2350 |
| ThinkPad 500 4/85 .....   | 2199   | Value Point 486DX2-66 4/340 .....                  | 2550 |
| ThinkPad 500 4/170 .....  | 2669   |                                                    |      |
| ThinkPad 720 4/120 .....  | 3099   |                                                    |      |
| ThinkPad 720 4/160 .....  | 3199   |                                                    |      |
| ThinkPad 720C 4/160 ..... | 4699   |                                                    |      |

#### TEXAS INSTRUMENTS

|                              |        |                                   |      |
|------------------------------|--------|-----------------------------------|------|
| TM4000 WinSLC-25 4/120 ..... | \$1899 | TM4000 WinDX2-50 8/200 .....      | 2999 |
| TM4000 WinDX-25 4/120 .....  | 2359   | TM4000 WinSX-25 Color 4/120 ..... | 2599 |
| TM4000 WinDX-25 4/200 .....  | 2559   | TM4000 WinDX2-40 8/200 .....      | 3599 |



|                                                    |        |
|----------------------------------------------------|--------|
| 386-25SLC 4/120 with 24/96 Modem & DOS .....       | \$1265 |
| 486-25SLC 4/120 with 24/96 Modem & DOS .....       | 1665   |
| 486-25SLC Color 4/120 with 24/96 Modem & DOS ..... | 2299   |

#### NEC

##### UltraLite VERSA Notebooks

|                        |        |
|------------------------|--------|
| 486SL-20 4/120 .....   | \$2659 |
| 486SL-20C 4/120 .....  | 3639   |
| 486SLC-25 4/120 .....  | 3739   |
| 486SLC-25C 4/120 ..... | 3759   |
| 486SLC-25C 4/180 ..... | 3999   |
| 486SLC-33 4/80 .....   | 3229   |
| 486SLC-33C 4/180 ..... | 4269   |



|                     |       |
|---------------------|-------|
| DeskJet 500 .....   | \$299 |
| DeskJet 500C .....  | 489   |
| DeskJet 550C .....  | 585   |
| LaserJet 4L .....   | 680   |
| LaserJet IIIP ..... | 855   |
| LaserJet 4 .....    | 1365  |

### PRINTERS

|                            |       |                           |     |
|----------------------------|-------|---------------------------|-----|
| OKILASER 400 .....         | \$565 | EPSON ML 320 .....        | 295 |
| OKIDATA 810 .....          | 899   | PANASONIC KXP 1124i ..... | 299 |
| NEC Laser 95 .....         | 1299  | PANASONIC KXP 2123 .....  | 249 |
| EPSON ActionLaser II ..... | 685   | PANASONIC KXP 2180 .....  | 169 |

## CALIFORNIA COMPUTER CO.

3401 Investment Blvd. #3  
Hayward, CA 94545



Hours: M-F 9:30-5:30

**[510] 785-3850**

**Fax [510] 783-5128**

Government & Corporate P.O.s Accepted  
PRICES REFLECT CASH PRICES  
Prices Subject to Change Without Notice. Not  
Responsible for Typographical Errors. Logos  
are Property of Their Respective Companies





# Songtech International, Inc.

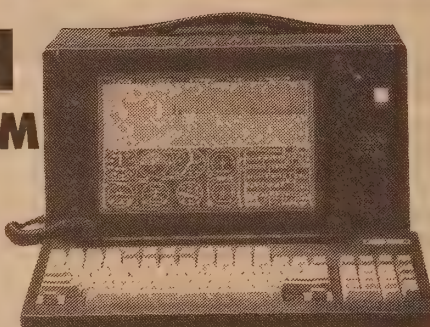
Tel: 510-770-9051 • Fax: 510-770-9060

## POWERFUL PORTABLES!

### KINGTECH

#### 486DX/33 SYSTEM LCD PORTABLE

- 128K CACHE MEMORY EXP TO 256K
- 4 MB RAM, 2-3 FREE SLOTS
- 1.2 MB/1.44 MB FDD
- 120 MB IDE HARD DRIVE
- SUPER IDE CONTROLLER (2S, 1P, IDE)



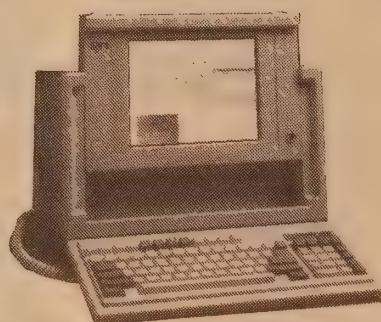
VGA PAPER WHITE LCD  
**\$1645**

386DX/40  
**\$1385**

#### 486DX/33 PORTABLE SYSTEMS

- 128K CACHE MEMORY EXP TO 256K
- 4 MB RAM, 2-3 FREE SLOTS
- 1.2 MB, 1.44 MB FLOPPY DISK DRIVES
- 120 MB HARD DRIVE
- SUPER IDE CONTROLLER (2S, 1P, IDE)

VGA PAPER WHITE LCD ..... \$1745  
HIGH-CONTRAST VGA PLASMA ... 2100  
386DX/40 ..... 1485/1845  
COLOR LCD ..... 3895  
COLOR LCD VGA (ACTIVE MATRIX) .. 3895



#### COLOR LCD VGA (ACTIVE MATRIX)

##### 486DX-50 PORTABLE

- 10" TFT ACTIVE MATRIX COLOR VGA DISPLAY
- 640 X 480 256 COLORS
- 486DX-50 MHz MICROPROCESSOR
- 4 MB RAM (Expandable to 32)
- COMBO FLOPPY DRIVE
- 120 MB IDE HARD DRIVE
- 2 SERIAL, 1 PARALLEL PORTS
- 101 KEY KEYBOARD
- MS DOS 6
- CARRYING BAG
- SIMULTANEOUS DISPLAY
- 15.7" X 9.45" X 7.9"
- 25 LBS



**CALL FOR NEWEST  
MARKET PRICE**

#### SVGA COLOR CRT PORTABLE

##### 486DX-50 LOCAL BUS

- 128K CACHE EXP TO 256K
- 4 MB RAM W/2 FREE SLOTS
- 1.2 MB & 1.44 MB FLOPPIES
- 120 MB IDE HARD DRIVE
- SUPER I/O (2S/1P, IDE)
- 1024 X 768 SVGA CARD 1MB
- 8.5" TRINITRON 26mm dp CRT



**\$2495**

MULTIMEDIA OPTION ..... \$495

### MULTIMEDIA PACKAGES

|                                    |                                               |
|------------------------------------|-----------------------------------------------|
| Golden Sound Pro ..... \$155       | Panasonic CD-Rom ..... 195                    |
| Sound Blaster Pro 16 Bit ..... 165 | Toshiba CD-ROM SCSI ..... 445                 |
| Teac CD-ROM SCSI ..... 365         | Sony 31A CD-ROM ..... 189                     |
| Stereo Speakers 7W ..... 35        | Stereo Speakers 30W ..... 65                  |
| CD Titles ..... CALL               | CALL FOR OTHER MULTIMEDIA PRODUCTS NOT LISTED |

### COMPLETE SYSTEMS

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| 486DX2-66 MHz VESA ..... CALL     | 486-33 MHz w/64K Cache ..... CALL |
| 486-50 MHz EISA ..... CALL        | 386-40 MHz w/64K Cache ..... CALL |
| 486-50 MHz ISA ..... CALL         | 386-33 MHz w/64K Cache ..... CALL |
| 486-50 MHz w/64K Cache .... CALL  | 486SX-25 MHz ..... CALL           |
| 486-33 MHz VESA Local Bus .. CALL | 386SX-20 MHz ..... CALL           |

### SYSTEM CONFIGURATIONS

- ◆ High Quality Motherboard
- ◆ 4MB RAM On Board
- ◆ 1.2 & 1.4MB Floppy Drive
- ◆ SVGA Monitor .28mm DP
- ◆ 120MB Hard Drive
- ◆ 1 MB VGA Display Card
- ◆ Mini-Tower Case w/200 W PS
- ◆ Enhanced 101 Keyboard
- ◆ Mouse
- ◆ IDE I/O (2S/P/G) Controller

#### VIDEO CARDS & MONITORS

|                                           |
|-------------------------------------------|
| VESA 1B SVGA 1MB ..... \$95               |
| Super VGA 1024 x 768 0.28 ..... 255       |
| Diamond Stealth 24 SVGA<br>1MB ..... 165  |
| Trident Super VGA 16 Bit,<br>1MB ..... 55 |
| Impression 14" NonInterlace ..... 269     |
| Impression 14" Super VGA ..... 250        |

#### DISK SPECIALS

|                                |
|--------------------------------|
| Conner 120MB 19ms IDE .... 170 |
| Conner 170MB IDE ..... 195     |
| Maxtor 130MB IDE ..... 179     |
| Maxtor 245MB IDE ..... 235     |
| Maxtor 340MB IDE ..... 305     |
| Maxtor 340MB SCSI ..... 425    |

#### MATH CO & MEMORY

|                              |
|------------------------------|
| 80387SX-25 ..... \$55        |
| 80387DX-33 ..... 59          |
| 80387DX-40 ..... 65          |
| 256K SIMM Module ..... CALL  |
| 1MB SIMM Module ..... CALL   |
| 4MB SIMM Module ..... CALL   |
| 386,486 CPU ..... IN STOCK   |
| Cooling Fan For CPU ..... 15 |

#### FLOPPY DRIVES

|                                          |
|------------------------------------------|
| Teac 5 1/4" 1.2MB FDD .... \$49          |
| Teac 3 1/2" 1.44MB FDD .... 45           |
| Teac 1.2 & 1.44 Combo<br>Drive ..... 125 |

#### KEYBOARDS

|                                    |
|------------------------------------|
| Enhanced 101 Click (baby) ... \$29 |
| MTEK 104 Click ..... 35            |
| MaxiSwitch 101 ..... 35            |
| Keytronics 101 ..... 35            |
| Omnikey 101/102 ..... 69           |
| Omnikey Ultra 130 ..... 99         |

#### COMPUTER CASES

|                                   |
|-----------------------------------|
| Slide-In Case w/200 W PS ... \$55 |
| Mini-Tower w/200 W PS ..... 59    |
| Med-Tower w/200 W PS ..... 69     |
| Full-Tower w/230 W PS ..... 89    |

#### POWER SUPPLY

|                                  |
|----------------------------------|
| SCSI Ext Box w/ PS 30W .... \$75 |
| 200 W AT ..... 39                |
| 230 W XT/AT ..... 45             |
| 285 W AT ..... 55                |
| 300 W AT ..... 75                |

#### CONTROLLER CARDS

|                                    |
|------------------------------------|
| 16-Bit Ethernet Card 2000B .. \$69 |
| Adaptec 1542CK SCSI ..... 265      |
| Adaptec 1540A SCSI ..... 85        |
| MFM 1:1 16 Bit ..... 18            |
| IDE I/O (2S/P/G) ..... 15          |
| AT I/O (2S/P/G) ..... 12           |
| IDE Card ..... 12                  |
| High Speed AT I/O (2S/P/G) 35      |

#### MOTHERBOARDS

|                            |
|----------------------------|
| 486DX2/66 VESA ..... \$625 |
| 486DX/50 VESA ..... 550    |
| 486DX2/66 ISA ..... 610    |
| 486DX/50 ISA ..... 530     |
| 486DX/33 VESA ..... 395    |
| 486DX/33 ISA ..... 380     |
| 486SX/33 ISA ..... 265     |
| 486SX/25 ISA ..... 185     |
| 486DX/33 ISA ..... 185     |
| 386SLC2/50 ISA ..... 325   |
| 486DX/40 ISA ..... 125     |
| 386SX/33 ISA ..... 85      |

#### ACCESSORIES

|                                            |
|--------------------------------------------|
| Logitech Mouseman (Serial) ..... \$65      |
| Logitech Mouseman (Bus) ..... 69           |
| Logitech Trackman<br>(Serial/PS2) ..... 85 |
| MS-DOS 6.0 ..... 45                        |
| Microsoft Windows V3.1 ..... 45            |
| MODEM                                      |
| 2400 bps ..... \$30                        |
| Fax/Modem 2400/9600 .... 48                |
| High-Speed 14400/14400                     |
| Fax/Modem ..... 245                        |

### AND MUCH MORE...

CALL FOR BEST PRICES  
DEALER INQUIRIES  
WELCOME

**44061 So. Grimmer Blvd. Fremont, CA 94538**

PC/XT/AT are registered trademarks of International Business Machines, Inc.  
Prices subject to change w/o notice. Not responsible for typographic errors.



Monitors

Networks

Plotters

**(408) 263-8500**

**ONSITE  
Service & Repair**

**We Service**

**SYSTEMS:**

All Clones  
IBM (AT/PS2)  
Compaq  
HP, DEC, SUN  
AT&T, ALR  
AST, Everex  
ALL MAC's/Apples

**PRINTERS:**

All Dot Matrix  
All Laser Printers

**MONITORS:**

All EGA, VGA, SVGA

**PLOTTERS:**

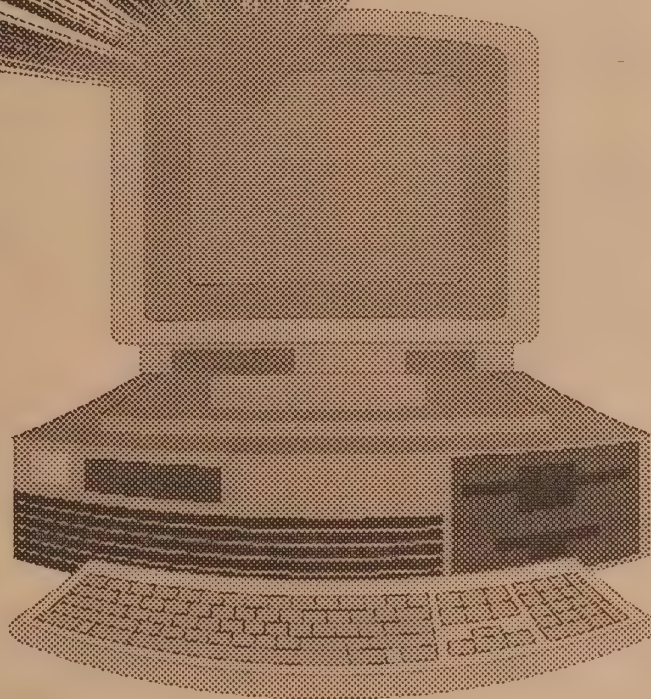
H.P. (All models)

**NETWORKS:**

Novell  
MS for Workgroups  
LANTastic

**"FREE"  
LOANERS  
Maintenance  
Contracts**

**Rentals  
Available**



**"New"  
Expanded  
Location**

Please Call  
**(408) 263-8500**

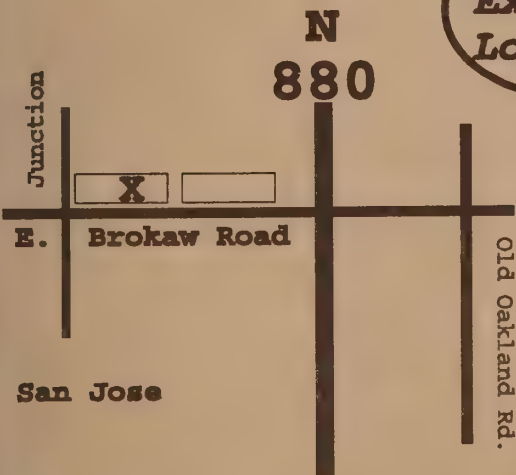
**Store Hours**

Mon-Fri 8:00-6:00  
Sat. 10:00-3:00  
Sun. Closed

\*\*\*

Corporate P.O.'s,  
C.C.'s & checks are  
always welcome.

FAX# (408) 453-9306



**Computask**  
YOUR COMPUTER MAINTENANCE COMPANY

565 E. Brokaw Road, San Jose, CA 95131



**Clip  
Coupon**



**SEP/OCT Special**

**\$ 50.00\***  
**FLAT-RATE  
LABOR(In-House)**

\* PARTS extra, if needed.

Does NOT include Monitors



continued from page 70

utilize Notes in-house. Both Microsoft and Borland recently announced their support for the Lotus Notes platform. This is an incredible testament to the industry acknowledgment of the Notes standard.

Notes is office automation software. It runs on virtually any network including Novell, AppleTalk, and Workgroup for Windows and on some UNIX-based platforms. Notes uses a file folder presentation screen which makes it intuitive and easy. Traditional database interfaces are often clumsy and fixed. Notes provides flexibility that more closely parallels the way our minds work. Notes has a database replicating feature that makes it possible for users to share information whether in the same office or across the country.

## SOLVING PROBLEMS

Prior to our implementation of Lotus Notes in-house, just selling a computer required a tremendous amount of administrative steps. When a request came in for a computer system, the salesperson first looked up the costs of the components in a price list printed from a Paradox database. Prices were rekeyed into an Excel spreadsheet, printed out, and faxed to the customer. A "build" form was checked off and sent to the PC assembly technicians. The technicians entered information into a database and the receptionist created an invoice in a custom-written dBASE point-of-sale system. Customer inquiries about order status required interaction between the salesperson and the assembly supervisor. Completed orders required more interaction along with rekeying information into an accounting program. A copy of the invoice was filed electronically and warranty questions required much searching to determine date of purchase, component manufacturer, etc.

Lotus Notes enabled us to eliminate the need to enter the same information into different databases. Anyone, whether in our Benicia or San Francisco office, can easily use Notes to determine the status of the work-in-progress. Electronic maintenance of all records including service calls or visits enable faster response and better service. Information is easily retrieved in dozens of different ways whether by customer, serial number, date purchased, item, etc.

We chose Keyfile Document Management Software to eliminate an even more severe administrative maze for one of our banking clients. Its IRA department handles one thousand pieces of paper a day during IRA season. Stacks of paper grow on desks awaiting filing while employees rush to retrieve, photocopy, attach, fax, and route documents for approval. Misfiling of an IRA form adds to the bank's difficulties to meet customer requests in a timely manner.

With Keyfile documents are scanned into the network and filed electronically. Multiple keyword indexing eliminates misfiled and lost documents. Once retrieved, employees annotate the documents using electronic sticky notes. They can then route them to supervisors for approval. Keyfile also includes the ability to automatically fax, route, and email documents just by dragging them onto a customized distribution icon.

Management has the unprecedented opportunity to use imaging and groupware products to apply a "scientific" method to analyzing their administrative environments. Rather than simply giving employees a PC and telling them to "go to it," specific guidelines should be set. Output should be measured against standards to determine the true productivity of the office worker. Time-wasting tasks should be reengineered, information bottlenecks eliminated, and paperwork reduced to a minimum. A scientific approach to managing the office enables productivity gains on a scale never even imagined in the factory. ■

# YOUR CONNECTION SOLUTION

FREE CATALOGUE  
Call Today To Get Yours!

## Clearance Specials

|                                        |         |
|----------------------------------------|---------|
| UL approved printer cables starting at | \$ .94  |
| 3 ft Mac/SCSI                          | \$1.60  |
| Data Switch Box, DB 25 AB              | \$4.25  |
| Auto Data Switch                       | \$7.50  |
| Power Pad                              | \$11.00 |
| Power Strip, 6 outlet                  | \$2.50  |
| Mouse Adapter                          | \$ .63  |
| Monitor Arms                           | \$23.00 |
| Keyboard Drawer                        | \$14.00 |
| Mouse Pad                              | \$ .70  |
| Minimum Order \$100.00                 |         |

Vaster Electronics is a world leader in cabling, network connectors and computer accessories. We manufacture and stock the largest inventory of connection equipment anywhere and sell it at unbeatable prices.

CALL NOW AND ASK FOR  
OUR FREE CATALOGUE.

TEL: (408) 985-5950  
FAX: (408) 985-9452



## VASTER ELECTRONICS TECHNOLOGY CORP.

1176 Aster Ave., Suite E  
Sunnyvale, CA 94086

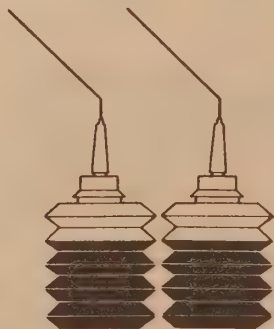
Don't Replace Your Inkjet Cartridges.  
Refill Them For As Little As

# \*\$9.99\*

## For Two Bottles!

For use with  
Hewlett Packard DeskJet and DeskWriter families.  
Hewlett Packard Fax-200 and Fax-300, Cartridge #HP51608A

Pages Print  
1,500



To Order Call  
**1-800-532-3903**

All trademarks and copyrights acknowledged.



# Service and Product Selection is our Personal Commitment



It is what Separates NCA from the rest.

▶ The Largest Selection of Hard Drives and Memory Storage Devices Worldwide

▶ The Best Brand Name Computer Products in the Industry

▶ The Most Competitive Prices Nationwide

▶ Unparallel Service and Commitment to Customer Satisfaction

## NCA

Computer  
Products

SUNNYVALE • 1202 Kifer Road. (408) 739-9010  
SAN JOSE • 962 Blossom Hill Rd. (408) 363-4600

## NCA Corporate

Dedicated to Serving Purchasing Agents Worldwide

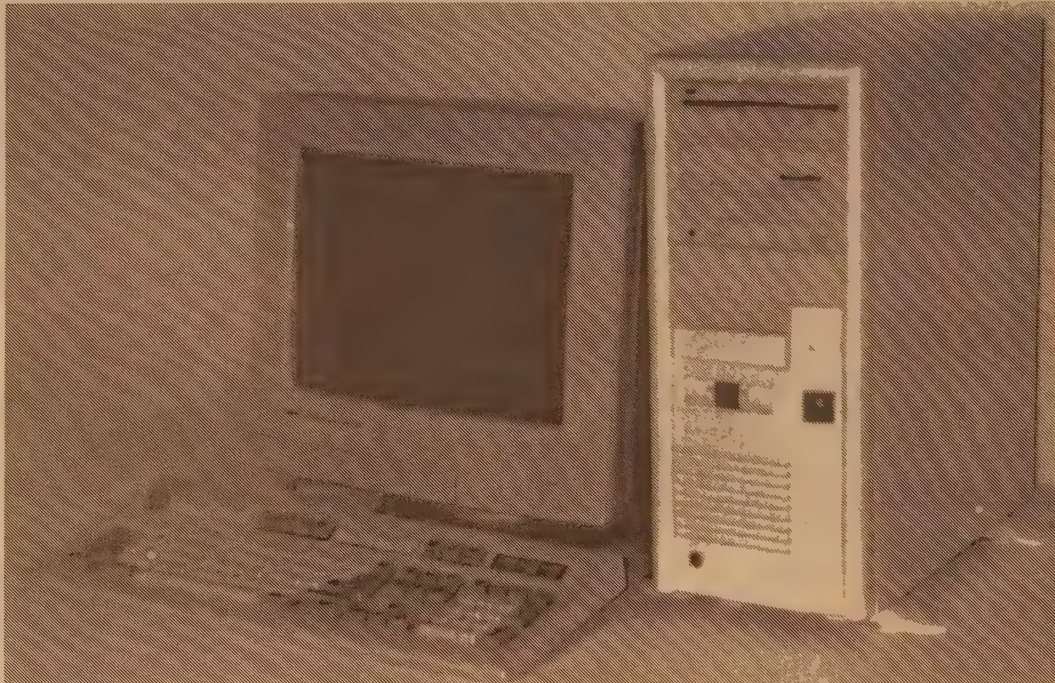
# 408 522-8672

*22 pages of Computer Products to follow...*



# Customize to your needs

With 22 Pages Of Options to Add On



Monitor and additional accessories shown are not included.

## Alexis 340

# \$299

### 386DX-40

#### Mini Tower System

- AMD 386DX-40MHz
- 128K Cache (upto 256K)
- Mini Tower with 230W Power
- TEAC Floppy Drive 1.2 or 1.44
- IDE Controller 2FD/2HD
- I/O: 2 serial, 1 Parallel, 1 Game
- 101 Mitsumi Keyboard
- Clock & Calender
- 0MB RAM (up to 32MB)  
(Not Pictured)

## IBM manufactured 486SLC2-50MHz Computer System

Manufactured  
& Tested by  
**IBM**



Monitor Not Included

- 486SLC2/50MHz
- SVGA 1280X1024
- WD 24-Bit Accelerator Video port Built-in
- 2 FD/2 IDE HD Controller, 2S/1P/1G port
- Elegant Desktop Case

# \$499

## Alexis 452VL

# \$499

### 486SLC-2 /50MHz VESA Medium Tower

- Alaris Motherboard, Manufactured by IBM
- IBM 486SLC-2/50MHz CPU
- 2 Local Bus 32-Bit Slots
- 7 16-Bit Slots, 1 8-Bit Slot
- 128K Cache
- Medium Tower with 250W UL power Supply
- TEAC Floppy Drive 1.2 or 1.44
- IDE Controller 2FD/2HD
- I/O: 2 serial, 1 Parallel, 1 Game
- 101 Mitsumi Keyboard
- Clock & Calender
- 0MB RAM (up to 16MB)  
(ADD \$30 FOR CO-PRO)

## Alexis 462VL

# \$599

Above w/ Alaris 486SLC-2/66MHz  
MotherBoard

## Value, Value, & More Value

### Standard on our Alexis 486-DX Series

- Medium Tower with 9 bays
  - 4 Exposed 5.25" Bays
  - 2 Exposed 3.5" Bays
  - 3 Hidden Bays
- 250W UL Approved Power Supply
- Intel 486 Processor
- High Quality Well Designed Case
- 8 16-Bit Slots Motherboard
- 2 VESA Local Bus Slots
- ZIF Socket for Future Upgrade of  
CPU to Pentium Over Drive
- 128K Cache (to 256K)
- TEAC Floppy Drive 1.2 or 1.44
- 101 Mitsumi Keyboard
- IDE Controller 2FD/2HD
- I/O: 2 serial, 1 Parallel, 1 Game
- 1 Year Warranty on Parts & Labor

## Alexis 433VL

# \$599

### 486DX-33MHz VESA MED TOWER SYSTEM

## Alexis 450VL

# \$779

### 486DX-50MHz VESA MED TOWER SYSTEM

## Alexis 466VL

# \$839

### 486DX-66MHz VESA MED TOWER SYSTEM

Your Hard Drive & Multimedia Super Source

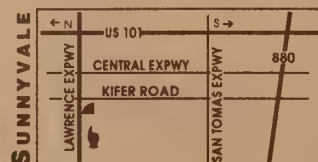


# NCA

## Computer Products

POS VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

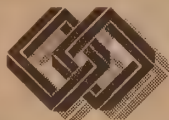
Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420



# NCA's Alexis-II Systems

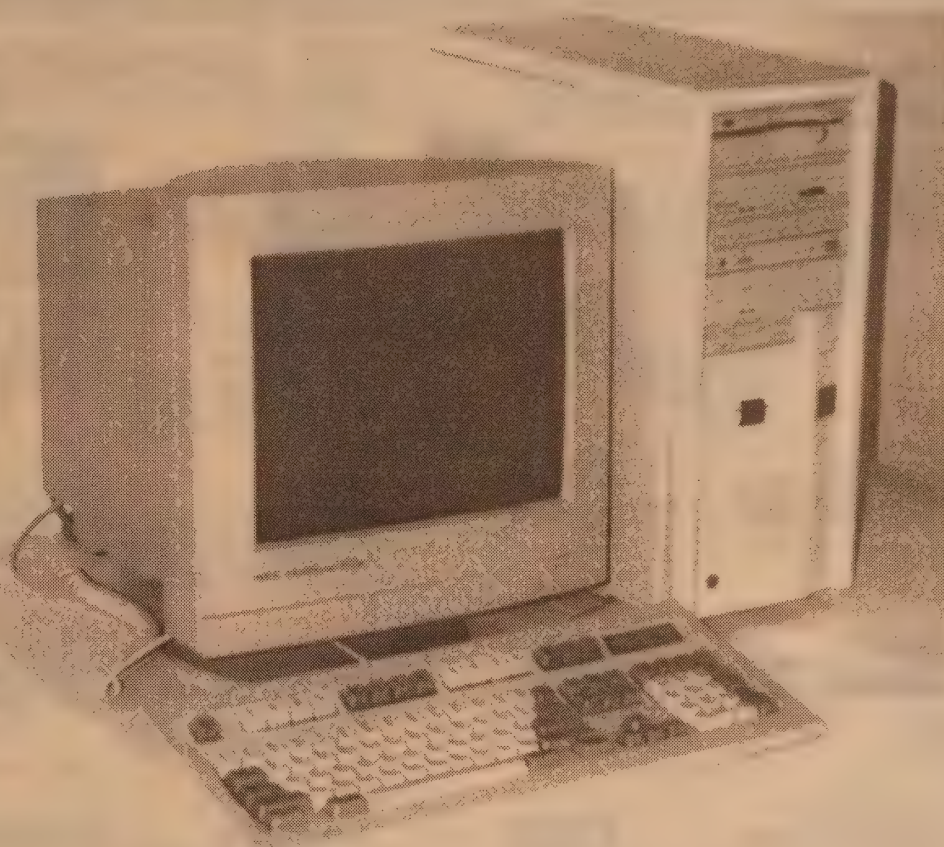
FEATURING



**DIAMOND**

**FastBus VLB**

MOTHERBOARDS



## The Board

- Diamond FastBus VESA Motherboard
- 2-VESA Local Bus Standard Slots
- Intel CPU 486DX-33, 486DX-50, or 486DX/2-66
- ZIF Socket: Easiest, most effective upgrade
- 0 RAM up to 128MB on Board (uses True 32-bit, 72pin)
- Upgradable & Reprogrammable Bios
- 256K Write-Back Cache Memory
- Built-in IDE and Floppy Controller
- Built-in 2 Serial, 1 Parallel Port
- Socket for Weitek 4167 Co-Processor
- Chips & Technology 82C4021 Chip Set
- Up to 16MB/Sec I/O Transfer Rate

## The Case

- Medium Tower
- 250W UL Approved Power Supply
- 9 Bays; 4 5.25" Exposed Bays
  - 2 3.5" Exposed Bays
  - 3 Hidden Bays
- High Quality Construction & Design

## & More...

- Teac 1.44 or 1.2M Floppy Drive
- Mitsumi High Quality 101 Keyboard
- 1 Year Parts & Labor
- NCA's Quality & Service

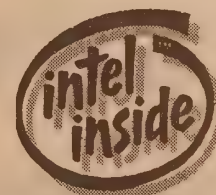
Monitor and additional accessories shown are not included.

## Using world's fastest Motherboards for Windows & AutoCAD

*Alexis 433VL-II*

**\$739**

486DX-33 VESA  
Med-Tower System



*Alexis 455VL-II*

**\$859**

486DX/2-50 VESA  
Med-Tower System

*Alexis 466VL-II*

**\$989**

486DX/2-66 VESA  
Med-Tower System

## Customize to your needs...

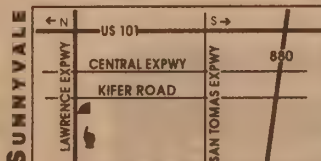
With 22 Pages Of Options to Add On

Your Hard Drive & Multimedia Super Source



**NCA**

**Computer  
Products**



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:  
(408) 522-8672  
P.O. FAX (408) 739-2420

POS VISA MasterCard DISCOVER AMERICAN EXPRESS Price subject to change without notice. Limited quantity on Special Items Not responsible for type errors. Expires Oct 22nd, 1993



# HARD DRIVE SUPER SOURCE MORE

## CONNER®



**170MB IDE \$168**

► 17MS.  
► CP30174E

**212MB IDE \$198**

► 12MS.  
► CP30204  
256K CACHE

**250MB IDE \$209**

► 14MS.  
► CP30254

**340MB IDE \$289**

► 13MS.  
► CP30344

**540MB IDE \$549**

► <12ms  
► CP30544  
LOW PROFILE 3.5" X1"

SCSI

| CAPACITY | M/N     | CACHE | SPEED | SIZE   | INTERNAL | EXTERNAL |
|----------|---------|-------|-------|--------|----------|----------|
| 170MB    | CP30170 | 64K   | 17ms  | 3.5X1" | \$229    | \$349    |
| 212MB    | CP30200 | 256K  | 12ms  | 3.5X1" | \$289    | \$399    |
| 540MB    | CP30540 | 256K  | 12ms  | 3.5X1" | \$569    | \$689    |

## digital™

Digital Equipment Corporation

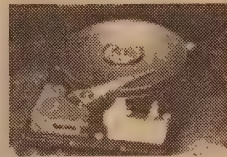
High End, High Capacity

**5-YEAR WARRANTY**

Fast SCSI-II

| CAPACITY | M/N   | CACHE   | RPM  | SPEED  | INTERNAL | EXTERNAL |
|----------|-------|---------|------|--------|----------|----------|
| 1.0GB    | 3107L | 3.5"X1" | 5400 | 9ms    | \$1049   | \$1169   |
| 1.0GB    | 3105S | 3.5"    | 5400 | 9.5ms  | \$999    | \$1129   |
| 1.6GB    | 3160S | 3.5"    | 5400 | 9.5ms  | \$1299   | \$1429   |
| 2.0GB    | 5200S | FH      | 3600 | 12.5ms | \$1399   | \$1599   |
| 3.5GB    | 5350S | FH      | 5400 | 11.5ms | \$2899   | \$3099   |

## WESTERN DIGITAL



**212MB IDE \$199**

12MS. MODEL#WD2200

**250MB IDE \$219**

14MS. MODEL#WD2250

**340MB IDE \$278**

14MS. MODEL#WD2340

**420MB IDE \$389**

13MS. MODEL#WD2420

## IBM

**1.0GB FAST SCSI-II  
LOW PROFILE 3.5"X1"**

► 800,000 Hrs. MTBF  
► 8.6ms Access Time  
► 5400 RPM  
► 512K Cache

INTERNAL

EXTERNAL

**\$1099 \$1199**

## SAMSUNG Electronics

2 Year Warranty

CAPACITY SPEED SIZE PRICE  
**120MB IDE 17ms 3.5X1" .....\$159**

## hp HEWLETT PACKARD

**2.1GB 3.5"**

FORMATTED CAPACITY  
FAST SCSI-II



► C2490  
► 8.9ms seek time  
► 6400 RPM  
► 500,000 MTBF  
► 5-Yr Warranty  
► 57 Mbits/sec transfer rate  
► Up to 20Megabytes/sec (synchronous)

**\$2099**

EXTERNAL.... \$2229

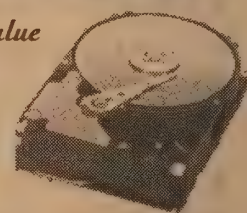
Brand new with 5-year factory warranty

SCSI

| CAPACITY | M/N    | CACHE | SPEED  | SIZE | INTERNAL | EXTERNAL |
|----------|--------|-------|--------|------|----------|----------|
| 1.0GB    | C2247  | 256K  | 10ms   | 3.5" | \$999    | \$1129   |
| 1.0GB    | C97558 | 256K  | 13ms   | FH   | \$1399   | \$1599   |
| 2.0GB    | C3010  | 256K  | 11.5ms | FH   | \$1999   | \$2199   |

## TOSHIBA

Superior Quality and Value  
5-year factory warranty



**877MB SCSI-II 3.5" \$699**

12MS. MODEL#MK438.

EXTERNAL \$829

**1.2GB SCSI-II 3.5" \$899**

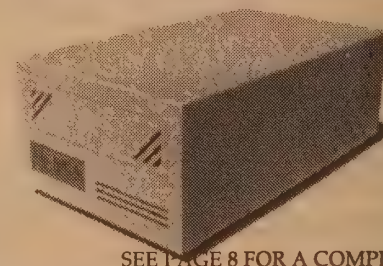
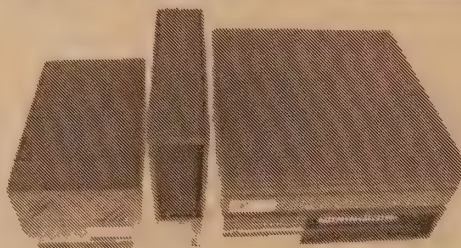
12MS. MODEL#MK538.

EXTERNAL \$1029

NCA's High Quality

## EXTERNAL DRIVES

For MAC, SUN, NeXT, and IBM Compatibles  
Complete with Cables, and formatting Software for Mac



SEE PAGE 8 FOR A COMPLETE LIST

Your Hard Drive & Multimedia Super Source



# NCA

## Computer Products

POs VISA MASTERCARD DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# HARD DRIVE SUPER SOURCE ▶ MORE

## Quantum<sup>TM</sup>

### SUPER SPECIALS

*Specify Quantum, Specify Quality*

**240MB IDE \$219**  
LPS240A

**240MB SCSI \$239**  
LPS240S

**1.2GB SCSI 3.5" \$969**  
PD1225S

BRAND NEW WITH A TWO YEAR FACTORY WARRANTY - FIVE YEARS ON PD SERIES ONE YEAR ON 2.5" DRIVES

## IDE

| CAPACITY | M/N      | CACHE | SPEED | SIZE   | PRICE |
|----------|----------|-------|-------|--------|-------|
| 120MB    | GO120    | 32K   | 16ms  |        | \$259 |
| 160MB    | GO160    | 32K   | 16ms  |        | \$369 |
| 85MB     | ELS85A   | 32K   | 17ms  | 3.5X1" | \$159 |
| 127MB    | ELS127A  | 32K   | 17ms  | 3.5X1" | \$169 |
| 170MB    | ELS170A  | 32K   | 17ms  | 3.5X1" | \$179 |
| 240MB    | LPS240A  | 256K  | Fast  | 3.5X1" | \$219 |
| 525MB    | LPS525AT | 256K  | FAST  | 3.5X1" | \$549 |

## SCSI

| CAPACITY | M/N     | CACHE | SPEED | SIZE   | INTERNAL | EXTERNAL |
|----------|---------|-------|-------|--------|----------|----------|
| 120MB    | GO120S  | 32K   | Fast  |        | \$299    | N/A      |
| 160MB    | GO160S  | 32K   | 16ms  |        | \$449    | N/A      |
| 85MB     | ELS85S  | 32K   | 17ms  | 3.5X1" | \$169    | \$289    |
| 127MB    | ELS127S | 32K   | 17ms  | 3.5X1" | \$189    | \$309    |
| 170MB    | ELS170S | 32K   | 17ms  | 3.5X1" | \$199    | \$329    |
| 240MB    | LPS240S | 256K  | Fast  | 3.5X1" | \$239    | \$359    |
| 525MB    | LPS525  | 256K  | Fast  | 3.5X1" | \$559    | \$679    |
| 700MB    | PD700   | 256K  | Fast  | 3.5"   | \$759    | \$879    |
| 1.0GB    | PD1050S | 512K  | Fast  | 3.5"   | \$899    | \$1029   |
| 1.2GB    | PD1225S | 512K  | Fast  | 3.5"   | \$969    | \$1089   |
| 1.8GB    | PD1800S | X     | Fast  | 3.5"   | \$CALL   | \$CALL   |

## HARD CARDS

COMPLETE KITS PLUG & PLAY, 16-BIT

|       |           |       |       |
|-------|-----------|-------|-------|
| 127MB | HARD CARD | EZ127 | \$289 |
| 170MB | HARD CARD | EZ170 | \$329 |
| 240MB | HARD CARD | EZ240 | \$439 |



## Seagate

▶ FACTORY NEW WITH FULL FACTORY WARRANTY

### BARRACUDA SERIES



**BARRACUDA I / 1.6GB**  
ST11950N  
INTERNAL **\$1699**

EXTERNAL \$1829

**BARRACUDA II / 2.1GB**  
ST12550N  
INTERNAL **\$2299**

EXTERNAL \$2429

- ▶ 3.5"
- ▶ 7200RPM
- ▶ 500,000MTBF
- ▶ Fast SCSI-II, 8ms

## IDE

| CAPACITY | M/N      | CACHE | SPEED | SIZE   | PRICE |
|----------|----------|-------|-------|--------|-------|
| 42MB     | ST351A/X | 32K   | 28ms  | 3.5X1" | \$129 |
| 107MB    | ST3120A  | 32K   | 15ms  | 3.5X1" | \$149 |
| 130MB    | ST3144A  | 32K   | 15ms  | 3.5X1" | \$179 |
| 245MB    | ST3283A  | 128K  | 12ms  | 3.5X1" | \$309 |
| 340MB    | ST3390A  | 256K  | Fast  | 3.5X1" | \$329 |
| 450MB    | ST3550A  | X     | 12ms  | 3.5X1" | \$479 |

## SCSI

| CAPACITY | M/N       | CACHE | SPEED             | SIZE   | INTERNAL | EXTERNAL |
|----------|-----------|-------|-------------------|--------|----------|----------|
| 245MB    | ST3283N   | 128K  | 12ms              | 3.5X1" | \$339    | \$459    |
| 450MB    | ST3550N   | 256K  | 12ms              | 3.5X1" | \$559    | \$679    |
| 525MB    | ST3600N   | 256K  | 12ms              | 3.5X1" | \$679    | \$799    |
| 1.0GB    | ST11200N  | 256K  | 12ms              | 3.5"   | \$949    | \$1059   |
| 1.3GB    | ELITE-I   | 256K  | 11ms              | FH     | \$1699   | \$1899   |
| 1.4GB    | ST41651   | 256K  | 14ms              | FH     | \$1189   | \$1389   |
| 1.9GB    | ST42100N  | 256K  | 14ms              | FH     | \$1489   | \$1689   |
| 2.1GB    | ST12400N  | 256K  | 10ms              | 3.5"   | \$1999   | \$2099   |
| 2.0GB    | ELITE-II  | 256K  | 11ms              | FH     | \$1899   | \$2099   |
| 2.9GB    | ELITE-III | 512K  | 11ms              | FH     | \$2299   | \$2499   |
| 2.9GB    | ST43401N  |       | Fast-Wide SCSI-II |        | \$2499   | \$3699   |

Seagate and the Seagate logo are registered trademarks and Elite is a trademark of Seagate Technology Inc.

Your Hard Drive & Multimedia Super Source



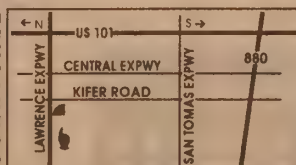
# NCA

## Computer Products

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice, Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government, Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# HARD DRIVE SUPER SOURCE MORE

## Maxtor®



### SUPER SPECIALS

**345MB IDE** \$285  
15ms, 7345A



**345MB SCSI** \$349  
15ms, 7345S

**540MB FAST SCSI-II OR IDE** \$719  
8ms, 6300RPM, 3.5"X1"

### IDE

|       | MODEL    | CACHE | SPEED | SIZE   | INTERNAL   |
|-------|----------|-------|-------|--------|------------|
| 131MB | 7131A    | 64K   | 14ms  | 3.5X1" | .....\$169 |
| 245MB | 7245A    | 64K   | 15ms  | 3.5X1" | .....\$219 |
| 345MB | 7345A    | 64K   | 14ms  | 3.5X1" | .....\$285 |
| 540MB | MXT-540A | 256K  | 8.5ms | 3.5X1" | .....\$719 |

### SCSI

|       | MODEL     | CACHE | SPEED | SIZE   | INTERNAL     | EXTERNAL |
|-------|-----------|-------|-------|--------|--------------|----------|
| 245MB | 7245S     | 64K   | 15ms  | 3.5X1" | \$249 .....  | \$369    |
| 345MB | 7345S     | 64K   | 14ms  | 3.5X1" | \$349 .....  | \$469    |
| 540MB | MXT-540S  | 256K  | 8.5ms | 3.5X1" | \$719 .....  | \$839    |
| 1.2GB | MXT-1240S | 256K  | 8.5ms | 3.5"   | \$1199 ..... | \$1329   |
| 1.5GB | P1-17S    | 256K  | 13ms  | FH     | \$1129 ..... | \$1329   |

THE FULL MAXTOR LINE IS AVAILABLE AT  
**YOUR HARD DRIVE & MULTIMEDIA SUPER SOURCE™**



## FUJITSU®



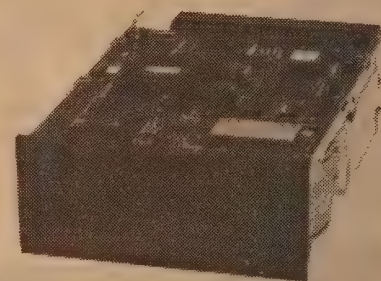
**520MB 3.5"**

- ▶ 3.5" HH Drive
- ▶ 12ms Seek Time
- ▶ 240K Read/Write Cache(SCSI)
- ▶ 5-Year Warranty



**IDE.. \$579**  
M2624T

**SCSI.. \$579**  
M2624FA



### IDE

|       | MODEL  | CACHE | SPEED | SIZE | INTERNAL   |
|-------|--------|-------|-------|------|------------|
| 425MB | M2623T | 64K   | 12ms  | 3.5" | .....\$499 |
| 520MB | M2624T | 64K   | 12ms  | 3.5" | .....\$649 |

### SCSI

|       | MODEL    | CACHE | SPEED | SIZE | INTERNAL     | EXTERNAL |
|-------|----------|-------|-------|------|--------------|----------|
| 425MB | M2623FA  | 240K  | 11ms  | 3.5" | ...\$549.... | \$669    |
| 520MB | M2624FA  | 240K  | 12ms  | 3.5" | ...\$579.... | \$699    |
| 1.0GB | M2694ESA | 256K  | 10ms  | 3.5" | ...\$939..   | \$1059   |
| 2.0GB | M2654SA  | 256K  | 12ms  | FH   | ....\$1699.  | \$1899   |

THE FULL FUJITSU LINE IS AVAILABLE AT  
**YOUR HARD DRIVE & MULTIMEDIA SUPER SOURCE™**

Your Hard Drive & Multimedia Super Source



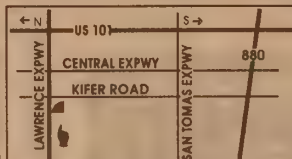
# NCA

**Computer Products**



Price subject to change without notice, Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420



# HARD DRIVE SUPER SOURCE MORE

## MICROPOLIS

Brand new with 5-year factory warranty

**1.75GB 3.5" IDE OR SCSI-II**



► MC2217

► 10ms Seek Time 5400RPM

► 3.5"

**\$1489**

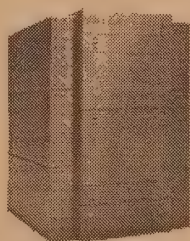
### IDE

|        | MODEL   | RPM  | SPEED | SIZE       | INTERNAL |
|--------|---------|------|-------|------------|----------|
| 1.0GB  | MC2210A | 5400 | 10ms  | 3.5" ..... | \$969    |
| 1.75GB | MC2217A | 5400 | 10ms  | 3.5" ...   | \$1489   |

### SCSI

|              | MODEL         | RPM         | SPEED       | SIZE            | INTERNAL        | EXTERNAL      |
|--------------|---------------|-------------|-------------|-----------------|-----------------|---------------|
| 670MB        | MC1624        | 3600        | 14ms        | HH .....        | \$729 .....     | \$849         |
| 1.0GB        | MC2210        | 5400        | 10ms        | 3.5" ....       | \$969 ...       | \$1089        |
| 1.0GB        | MC1598        | 3600        | 15ms        | FH .....        | \$969 ...       | \$1169        |
| <b>1.3GB</b> | <b>MC1528</b> | <b>3600</b> | <b>15ms</b> | <b>FH .....</b> | <b>\$999 ..</b> | <b>\$1199</b> |
| 1.4GB        | MC1908        | 5400        | 11ms        | FH ....         | \$1699 ....     | 1899          |
| 1.75GB       | MC2217        | 5400        | 10ms        | 3.5" ...        | \$1489 ..       | \$1599        |
| 1.8GB        | MC1548        | 3600        | 14ms        | FH ....         | \$1399 ..       | \$1599        |
| 2.0GB        | MC1924        | 5400        | 11ms        | FH ....         | \$1999 ..       | \$2199        |
| 3.0GB        | MC1936        | 5400        | 11ms        | FH ....         | \$2499 ..       | \$2699        |

## RAIDION™



### Fault-Tolerant Disk Arrays

RAID Level 5 Disk Subsystems

Includes: NOVELL or OS/2 Configuration Kits

|        |                            |         |
|--------|----------------------------|---------|
| LT1120 | Lite 3X560MB Modules ..... | \$4299  |
| LT2100 | Lite 3X2.1GB Modules ..... | \$5200  |
| RN2680 | 3X1.34GB Modules .....     | \$6599  |
| RN3500 | 3X1.75GB Modules .....     | \$8299  |
| RN4200 | 3X2.1GB Modules .....      | \$9599  |
| RM6040 | 3X3.2GB Modules .....      | \$11999 |

# NCA Is The Hard Drive Specialist

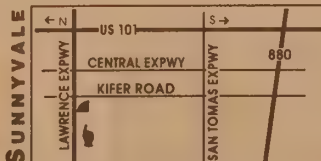
*With More Selection And  
Options Than Any Other  
Dealer Worldwide*

Your Hard Drive & Multimedia Super Source

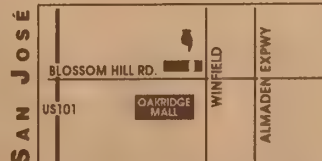


# NCA

**Computer  
Products**



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420

©1993 INVERSE CORPORATION

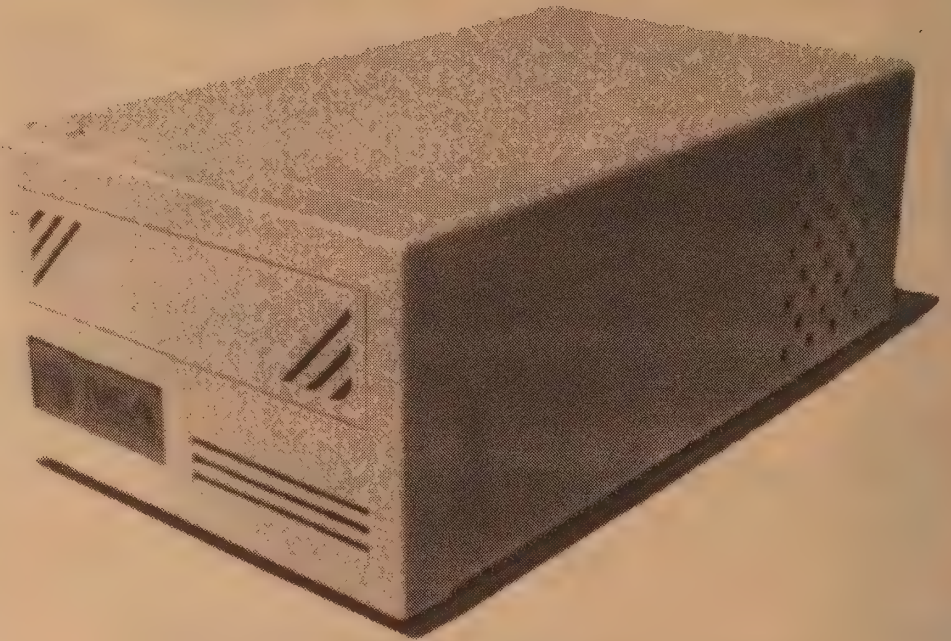


# EXTERNAL SCSI SUPER SOURCE

## NCA's High Quality External SCSI Sub-Systems

for MAC, SUN, NeXT,  
and IBM Compatibles

- High Quality External Cases.
- Sound Free Fan
- Top Manufacturers Quality SCSI Devices
- Universal Power Supply 110/220V
- 2 External Centronics Connectors
- Selectable SCSI ID.
- External Termination / includes a terminator
- SCSI Cable (Cent50-Cent50 or Cent50 to DB25)
- Power Cable
- Fully Tested and Approved
- Mac Formatting and Caching Software (upon request)
- External PC Kits Available



### NCA's **BARRACUDA I**

Half Height Enclosures  
3.5" Fixed SCSI Disk Drives

| SIZE      | MAKE       | SPEED | WARRANTY | PRICE  |
|-----------|------------|-------|----------|--------|
| Formatted |            |       |          |        |
| 85Mb      | Quantum    | 17ms  | 2Yr      | \$289  |
| 127Mb     | Quantum    | 17ms  | 2Yr      | \$309  |
| 170Mb     | Quantum    | 17ms  | 2Yr      | \$329  |
| 212Mb     | Conner     | 12ms  | 1Yr      | \$399  |
| 240Mb     | Quantum    | Fast  | 2Yr      | \$359  |
| 240Mb     | Seagate    | 12ms  | 1Yr      | \$459  |
| 245Mb     | Maxtor     | 15ms  | 2Yr      | \$369  |
| 345Mb     | Maxtor     | 15ms  | 2Yr      | \$469  |
| 425Mb     | Seagate    | 10ms  | 1Yr      | \$679  |
| 425Mb     | Fujitsu    | 12ms  | 5Yr      | \$669  |
| 520Mb     | Fujitsu    | 12ms  | 5Yr      | \$699  |
| 525Mb     | Quantum    | 10ms  | 2Yr      | \$679  |
| 525Mb     | Seagate    | 10ms  | 1Yr      | \$799  |
| 540Mb     | Maxtor     | 8.5ms | 2Yr      | \$839  |
| 540Mb     | Conner     | 12ms  | 1Yr      | \$689  |
| 700Mb     | Quantum    | fast  | 5Yr      | \$879  |
| 877Mb     | Toshiba    | 12ms  | 5Yr      | \$929  |
| 1.0Gb     | Micropolis | 10ms  | 5Yr      | \$1089 |
| 1.0Gb     | IBM        | 8ms   |          | \$1199 |
| 1.0Gb     | Seagate    | 10ms  | 5Yr      | \$1059 |
| 1.0Gb     | HP         | 10ms  | 5Yr      | \$1129 |
| 1.0Gb     | DEC        | 9.5ms | 5Yr      | \$1129 |
| 1.0Gb     | Fujitsu    | 10ms  | 5Yr      | \$1059 |
| 1.2Gb     | Quantum    | 12ms  | 5Yr      | \$1089 |
| 1.2Gb     | Maxtor     | 8.5ms | 3Yr      | \$1329 |
| 1.2Gb     | Toshiba    | 12ms  | 5Yr      | \$1029 |
| 1.6Gb     | DEC        | 9ms   | 5Yr      | \$1429 |
| 1.6Gb     | Seagate    | 8ms   | 5Yr      | \$1829 |
| 1.7Gb     | Micropolis | 10ms  | 5Yr      | \$1599 |
| 2.1Gb     | Seagate    | 10ms  | 5Yr      | \$2099 |
| 2.1Gb     | Seagate    | 8ms   | 5Yr      | \$2429 |
| 2.1Gb     | HP         | 8.9ms | 5Yr      | \$2129 |

### NCA's **BARRACUDA II**

Full Height Enclosures  
FH Fixed SCSI Disk Drives

| SIZE         | MAKE              | SPEED       | WARRANTY   | PRICE         |
|--------------|-------------------|-------------|------------|---------------|
| Formatted    |                   |             |            |               |
| 1.0Gb        | Micropolis        | 14ms        | 5Yr        | \$1169        |
| 1.0Gb        | Maxtor            | 13ms        | 2Yr        | \$1099        |
| <b>1.3Gb</b> | <b>Micropolis</b> | <b>14ms</b> | <b>5Yr</b> | <b>\$1199</b> |
| 1.4Gb        | Micropolis        | 11ms        | 5Yr        | \$1899        |
| 1.3Gb        | Seagate           | 11ms        | 1Yr        | \$1899        |
| 1.4Gb        | Seagate           | 14ms        | 1Yr        | \$1389        |
| 1.5Gb        | Maxtor            | 13ms        | 2Yr        | \$1329        |
| 1.8Gb        | Micropolis        | 14ms        | 5Yr        | \$1599        |
| 1.9Gb        | Seagate           | 14ms        | 5Yr        | \$1689        |
| 2.0Gb        | Seagate           | 11ms        | 5Yr        | \$2099        |
| 2.0Gb        | Micropolis        | 11ms        | 5Yr        | \$2199        |
| 2.0Gb        | Fujitsu           | 11ms        | 5Yr        | \$1899        |
| 2.0Gb        | HP                | 11.5ms      | 5Yr        | \$2199        |
| <b>2.0Gb</b> | <b>DEC</b>        | <b>12ms</b> | <b>5Yr</b> | <b>\$1599</b> |
| 3.0Gb        | Micropolis        | 11ms        | 5Yr        | \$2699        |
| 2.9Gb        | Seagate           | 11ms        | 5Yr        | \$2499        |
| 3.5Gb        | DEC               | 11.5ms      | 5Yr        | \$3099        |

**Combo SCSI Devices  
Custom Configurations  
Available**

### NCA's **BARRACUDA III**

External  
Non-Fixed SCSI Devices

#### SCSI BACKUP:

| SIZE(UP TO) | MAKE    | MODEL   | TYPE | PRICE  |
|-------------|---------|---------|------|--------|
| 250Mb       | Archive | 2150S   | 1/4" | \$499  |
| 525Mb       | Archive | 2525S   | 1/4" | \$699  |
| 1.3Gb       | Archive | 2750S   | 1/4" | \$899  |
| 2.0Gb       | Archive | 4540NT  | 4mm  | \$1149 |
| 4.0Gb       | Archive | 4324NT  | 4mm  | \$1299 |
| 8.0Gb       | Archive | 4542NT  | 4mm  | \$1299 |
| 2.2Gb       | Exabyte | EXB8200 | 8mm  | \$1749 |
| 2.2Gb       | Exabyte | EXB8205 | 8mm  | \$1799 |
| 5.0Gb       | Exabyte | EXB8500 | 8mm  | \$2549 |
| 5.0Gb       | Exabyte | EXB8505 | 8mm  | \$2599 |
| 2.0Gb       | HP      | 35470   | 4mm  | \$1149 |
| 8.0Gb       | HP      | 35480   | 4mm  | \$1249 |
| 2.0Gb       | WangDat | 3100    | 4mm  | \$1099 |
| 8.0Gb       | WangDat | 3200    | 4mm  | \$1199 |

MAC Backup Software add \$ 79

NovaBack for PC add \$ 99

NovaNet for 100+ users add\$449

#### EXTERNAL SCSI CD ROMs:

| MAKE      | MODEL | ACCESS | TRANSFER | PRICE  |
|-----------|-------|--------|----------|--------|
| TOSHIBA   | 3401B | 200ms  | 330Kb    | \$519  |
| NEC       | 84-1  | 265ms  | 330Kb    | \$529  |
| PANASONIC | 532   | 290ms  | 200Kb    | \$439  |
| CHINON    | 535   | 280ms  | 300Kb    | \$489  |
| TEXEL     | 5024  | 265ms  | 300Kb    | \$459  |
| PIONEER   | 604X  | 300ms  | 612Kb    | \$1199 |
| TEAC      | CD-50 | 265ms  | 300Kb    | \$439  |

Also Available:

External OPTICALS & Removable Cartridges by:  
Syquest, Bernoulli, Maxoptix, Fujitsu, Ricoh

(See Pages 10,11 &12)

Your Hard Drive & Multimedia Super Source

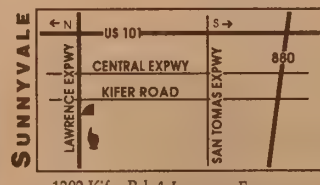


# NCA

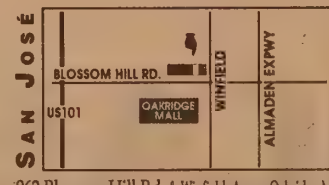
## Computer Products

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

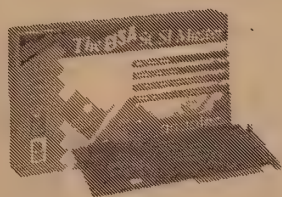
(408) 522-8672  
P.O. FAX(408) 739-2420



# CONTROLLERS SUPER SOURCE

## SCSI CONTROLLERS

### adaptec



#### SCSI CONTROLLERS

| MODEL  | DESCRIPTION                          | PRICE |
|--------|--------------------------------------|-------|
| 1510   | CD ROM 16-BIT -SCSI CARD KIT .....   | \$99  |
| 1522   | 16-BIT 7HD/2FD KIT .....             | \$148 |
| 1542C  | BUS MASTER COMPLETE KIT .....        | \$248 |
| 1542C+ | BUS MASTER KIT WITH COREL SCSI ..... | \$314 |
| 1640   | MICROCHANNEL FOR PS/2, 7HD .....     | \$319 |
| 1742   | EISA KIT, 32 BIT, 7HD/2FD .....      | \$399 |
| 2742   | EISA KIT, 14HD/ES ••NEW•• .....      | \$399 |

### ada always technology

Easiest to use, PLUG & PLAY with CD Drivers

#### SCSI CONTROLLERS

| MODEL  | DESCRIPTION                           | PRICE |
|--------|---------------------------------------|-------|
| IN2000 | 16 BIT 7HD/2FD "Easiest to use" ..... | \$179 |
| IN2000 | PRO WITH COREL SCSI .....             | \$215 |
| AL1000 | SCSI TO PARALLEL .....                | \$159 |
| AL1000 | PRO ABOVE WITH COREL SCSI .....       | \$185 |

### BUSLOGIC

SCSI CONTROLLERS FOR POWER USERS

#### SCSI CONTROLLERS

| MODEL    | DESCRIPTION                 | PRICE |
|----------|-----------------------------|-------|
| BT542    | BUSMASTER SCSI-II KIT ..... | \$229 |
| BT445    | VESA SCSI-II KIT .....      | \$299 |
| BT545KT  | BUSMASTER Fast SCSI .....   | \$229 |
| BTB742KT | EISA SCSI-II Kit .....      | \$349 |
| BTB747AK | EISA Fast SCSI Kit .....    | \$399 |

### PROMISE TECHNOLOGY INC.

Caching Controllers

<0.3 ms, Fast, Uses Standard 256K, 1X9, 4X9  
Simm Modules

#### SCSI CONTROLLERS

|                   |                               |       |
|-------------------|-------------------------------|-------|
| DC-2040           | CACHING 16-BIT SCSI-ISA ..... | \$159 |
| W/OMB (UP TO 16M) |                               |       |

### FUTURE DOMAIN

PLUG & PLAY



#### SCSI CONTROLLERS

| MODEL   | DESCRIPTION                       | PRICE |
|---------|-----------------------------------|-------|
| TMC850  | 8-BIT W/BIOS .....                | \$59  |
| TMC1670 | SVP 16-BIT SCSI VALUE PAK .....   | \$149 |
| TMC1680 | SVP 16-BIT VALUE PACK 7HD/4FD ... | \$159 |
| TMC1680 | DNK 16-BIT 7HD/4FD FULL KIT ..... | \$239 |

### TRANIOR

FULL KITS W/DRIVERS FOR CD-ROM/OPTICAL... ETC.

#### SCSI CONTROLLERS

| MODEL | DESCRIPTION                         | PRICE |
|-------|-------------------------------------|-------|
| T130  | 8-BIT, 7HD w/ SCSI works .....      | \$79  |
| T228  | MICROCHANNEL, 7HD .....             | \$139 |
| T338  | PARALLEL PORT to SCSI ADAPTER ..... | \$109 |
| T348  | PARALLEL PORT to SCSI PLUS .....    | \$149 |

TRANIOR SCSI Works

ASPI Device Drivers For:

CD-ROMs, Photo CD, Tape Drives, Syquest,  
Opticals, Scanners, Hard Drives

TAPEMATE II Back-up software & Music Box-Audio CD Software

**\$59**

### UltraStor

#### SCSI CONTROLLERS

| MODEL | DESCRIPTION                      | PRICE |
|-------|----------------------------------|-------|
| 14F   | FD/HD (10MB/SEC) .....           | \$199 |
| 24F   | EISA, 64K, Fast (33MB/SEC) ..... | \$369 |
| 34F   | VESA Local Bus Controller .....  | \$279 |

## IDE CONTROLLERS

### STANDARD IDE

#### IDE CONTROLLERS

| MODEL | DESCRIPTION                                 | PRICE |
|-------|---------------------------------------------|-------|
| 200   | 2HD/2FD CONTROLLER W/CABLES .....           | \$14  |
| 211   | 2HD/2FD W/2SERIAL, 1PAR, 1GAME .....        | \$23  |
| NCL53 | SMART CONT. W/BIOS EASY INSTALL .....       | \$49  |
| 223   | 2HD/2FD for VESA LOCAL BUS I/O .....        | \$59  |
| 15C   | CACHING (UP TO 8MB), 2HD, 2FD UltraStor ... | \$199 |

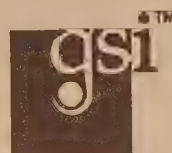
### PROMISE TECHNOLOGY INC.

Caching Controllers

0.3ms Fast Uses Standard SIMMS

#### IDE CACHING CONTROLLERS

| MODEL   | DESCRIPTION                                          | PRICE |
|---------|------------------------------------------------------|-------|
| DC-100  | CACHING with I/O .....                               | \$119 |
| DC-200  | CACHING (OMB, up to 16MB) 4HD/2FD .....              | \$99  |
| DC-4030 | VESA LOCAL BUS (OMB up to 16MB) 4HD/2FD/1 tape ..... | \$139 |



Increases Performance of IDE Drives,  
Floppy Drives, & doubles transfer rate  
on Floppy Tape Back-ups

◆ Easy Set-up ◆ High Performance ◆ Plug & Play

| MODEL | DESCRIPTION                              | PRICE |
|-------|------------------------------------------|-------|
| 18V   | CO-EXIST, HIGH PERF. IDE card .....      | \$49  |
| 21V   | 2HD (WITH BIOS), 4FD (UP TO 2.88M) ..... | \$59  |



IDE VLB (VESA LOCAL BUS).....**\$79**

#### WONDER 16550 IDE CARD

2 IDE DRIVES  
2 FLOPPY  
2 HIGH SPEED 16550 SERIAL PORTS  
1 PARALLEL PORT / 1 GAME

**\$79**



### PORT-FOLIO 16550

13-Port Super I/O Card  
4 INTEGRATED NS16550 HIGH SPEED UARTs

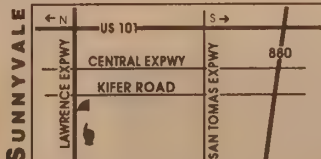
**\$129**

Your Hard Drive & Multimedia Super Source

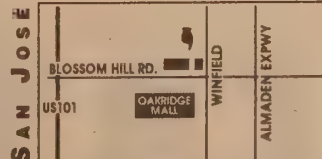


# NCA

## Computer Products



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

### NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice, Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



# OPTICALS SUPER SOURCE

## FUJITSU®

### Optical Advantage

- ▶ 128MB Removable Optical Diskette
- ▶ Rewritable
- ▶ 3.5" Diskette Size of Floppy
- ▶ Unlimited Storage
- ▶ Ideal For Data Mobility
- ▶ Fast Access time & Data Transfer
- ▶ ISO Standard

## 128MB REWRITABLE, REMOVABLE OPTICAL SCSI DRIVES

### INTERNAL 128MBYTE, 3.5" REWRITABLE OPTICAL

- ▶ Bare Optical Drive
- ▶ 2511A
- ▶ Low Profile, only 1"
- ▶ Fast 30ms Seek Time
- ▶ 3600RPM
- ▶ 256K Cache

# \$789



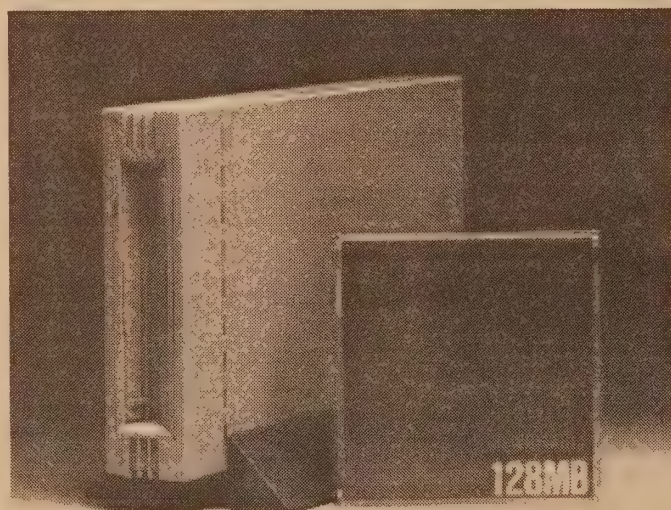
Cartridge sold separately

Dynal **MO**<sup>TM</sup> 128

### EXTERNAL SCSI 128MBYTE, 3.5" REWRITABLE OPTICAL FOR MAC OR IBM

- ▶ External Optical Drive
- ▶ Using 2511A Internal
- ▶ Includes 1 Cartridge
- ▶ Fast 30ms Seek Time
- ▶ 3600RPM
- ▶ 256K Cache
- ▶ Software for MAC (free upon request)

# \$899



### OPTICAL CARTRIDGES

| CAPACITY            | SINGLE | 5-PACK |
|---------------------|--------|--------|
| 128MB Fujitsu ..... | \$49   | \$239  |
| 128MB Maxell .....  | \$42   | \$199  |

Your Hard Drive & Multimedia Super Source

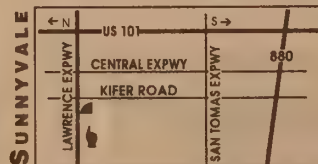


# NCA

## Computer Products

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items. Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# REMOVABLE SUPER SOURCE

O P T I C A L S



**HEWLETT  
PACKARD**

**1.3GB OPTICAL REWRITABLE SCSI**

► C1716, SCSI 1.3GB

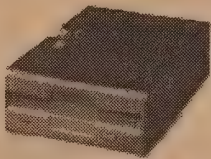
**INTERNAL  
\$CALL**

**EXTERNAL  
WITH CARTRIDGE  
\$CALL**

## RICOH

**128MBYTE, 3.5" REWRITABLE OPTICAL**

- Shielded case
- 3000 RPM
- 256K Cache
- Approx. 40ms
- SCSI-II



**INTERNAL  
\$719**

**EXTERNAL  
WITH CARTRIDGE  
\$889**

## FLOPPY DRIVES

## TEAC

**1.44M 3.5"**

**\$39**

5.25" Bracket... \$6

**1.2M 5.25"**

**\$49**

**1.2M/1.44M DUAL DRIVE**

**\$119**

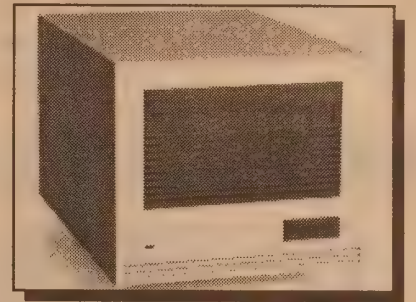
## TOSHIBA

2.88MB TOSHIBA Floppy Drive ..... \$59.00

Multifunction Magento-Optical Disk Drive for 1-Gbyte and 650-Mbyte Rewritable and WORM Disk Cartridges, With up to 4-Mbytes Read/Write cache

## Maxoptix™

- Unlimited Data Storage
- External SCSI Subsystem
- One year factory warranty
- 25-Year life of Glass Media
- Embedded SCSI/SCSI-2
- Data Transfer of up to 13.2Mbit/Sec.
- Ultimate Back-up for NOVEL (Ready-to-Boot Backup)



**TAHITI IIM - Multifunction**

- 1 MB Read/Write Cache
- External SCSI
- 35ms

**\$2389**

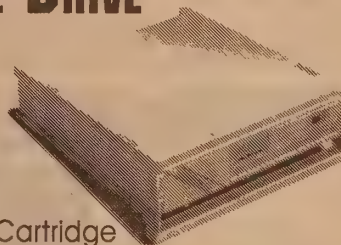
**TAHITI IIM - Multifunction**

- 4MB Read/Write Cache
- External SCSI
- 35ms

**\$2595**

## REMOVABLES

## BERNOULLI 150MB EXTERNAL SCSI CARTRIDGE DRIVE



- Cables
- One 150MB Cartridge



For MAC or IBM

**\$559**

90MB BERNOULLI REMOVABLE

PC VERSION ..... \$689 MAC Transportable ..\$529

| BERNOULLI CARTRIDGES | SINGLE      | 3-PACK |
|----------------------|-------------|--------|
| 65MB .....           | \$79 .....  | \$219  |
| 90MB .....           | \$159 ..... | \$439  |
| 105MB .....          | \$109 ..... | \$289  |
| 150MB .....          | \$159 ..... | \$429  |

## FLOPTICALS

## ΩMEGA®

**21MB Floptical Drive**



**MAC Version**

**INCLUDES:**

- External 3.5" 21MB Floptical
- One Floptical Media
- Cables
- Software for MAC

**\$399**

21MB MEDIA BY IOMEGA LASER ETCHED  
SINGLE .....\$19.99 5-PACK.....\$89.99

**PC Version**

**INCLUDES:**

- IOMEGA 21MB 3.5" Floptical
- One Floptical Media
- Host adapter SCSI 8-bit
- Cables
- Software for PC

**INTERNAL  
\$369**

**EXTERNAL  
\$429**

21MB MEDIA BY IOMEGA LASER ETCHED  
SINGLE .....\$19.99 5-PACK.....\$89.99

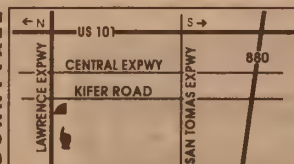
Your Hard Drive & Multimedia Super Source



## NCA

**Computer  
Products**

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420



Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



# REMOVABLES SUPER SOURCE



**SyQuest**  
TECHNOLOGY

- Removable Drive Cartridge, 44MB, 88MB, & 105MB
- 20ms Access speed (14ms on 105MB) • Unlimited Storage
- SCSI Embedded • For MAC or IBM • 2-Yr Warranty

## BARE DRIVES



### 44MB

- ▶ SQ555
- ▶ SCSI
- ▶ 20ms SEEK TIME
- ▶ 5.25" HH

**\$235**

### 88MB

- ▶ SQ5110
- ▶ SCSI
- ▶ 20ms SEEK TIME
- ▶ 5.25" HH
- ▶ Reads 44MB
- ▶ Reads/Writes to 88MB

**\$279**

### 88MB C

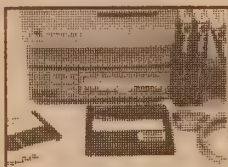
- ▶ SQ5110C
- ▶ SCSI
- ▶ 20ms SEEK TIME
- ▶ 5.25" HH
- ▶ Reads/Writes to 44MB & 88MB

**\$299**

## FOR ALL MACINTOSH MODELS\*

### COMPLETE, PREFORMATTED, PLUG & PLAY EXTERNAL KITS.

- ▶ EXTERNAL SYQUEST DRIVE
- ▶ CARTRIDGE
- ▶ CABLES (50C-Mac or 50C-50C)
- ▶ STANDARD POWER CORD
- ▶ FORMATTING SOFTWARE (\$39 Value)



\*Macintosh Plus or later

|                      |       |
|----------------------|-------|
| 44MB SQ555.....      | \$389 |
| 88MB SQ5110.....     | \$459 |
| 88MB C SQ5110C ..... | \$489 |
| 105MB SQ3105 .....   | \$629 |

## CARTRIDGES

| Capacity    | Single     | 5-Pack |
|-------------|------------|--------|
| 44MB .....  | \$63 ..... | \$309  |
| 88MB .....  | \$95 ..... | \$459  |
| 105MB ..... | \$85 ..... | \$399  |

## CONTROLLER

|                                    |       |
|------------------------------------|-------|
| 8-Bit Controller & Software .....  | \$59  |
| 16-Bit Controller & Software ..... | \$149 |

## EXTERNAL DRIVES

### 44MB

- ▶ EXTERNAL DRIVE
- ▶ 44MB CARTRIDGE
- ▶ STANDARD POWER CORD
- ▶ EXTERNAL CABLE
- ▶ INSTALLATION SOFTWARE (for Mac)
- ▶ PC Software included w/controller purchase

**\$389**

### 88MB

- ▶ EXTERNAL DRIVE
- ▶ 88MB CARTRIDGE
- ▶ STANDARD POWER CORD
- ▶ EXTERNAL CABLE
- ▶ INSTALLATION SOFTWARE (for Mac)
- ▶ PC Software included w/controller purchase

**\$459**

### 88MB C

- ▶ EXTERNAL DRIVE
- ▶ 88MB CARTRIDGE
- ▶ STANDARD POWER CORD
- ▶ EXTERNAL CABLE
- ▶ INSTALLATION SOFTWARE (for Mac)
- ▶ PC Software included w/controller purchase

**\$489**

## 105MB, 3.5" DRIVE

## INTERNAL

- ▶ SQ3105
- ▶ 14ms SEEK TIME
- ▶ SCSI

**\$449**

## 105MB INT. IDE .....\$369

## EXTERNAL 3.5" SCSI

- ▶ EXTERNAL SCSI DRIVE
- ▶ 105MB CARTRIDGE
- ▶ 14ms SEEK TIME
- ▶ STANDARD POWER CORD
- ▶ EXTERNAL CABLE
- ▶ INSTALLATION SOFTWARE (for Mac)

**\$629**

**K-STOR™**

## 250MB Removable Hard Drive



INTRODUCTORY PRICE

**Kalok**  
CORPORATION

### FEATURES

- IDE Docking station
- Drive Portability
- Drive Weight 10 oz.
- Data Security
- Transfer Rate up to 26 Mbits/Sec
- 2-Yr Warranty

### COMPLETE KIT INCLUDES

- 250MB Removable Hard Disk Drive
- Docking Module
- Carrying Case
- Software & Manual

**\$399**

### Extra Docking Station

**\$59**

### Extra 250MB Drive

w/Carrying Case & Software

**\$349**

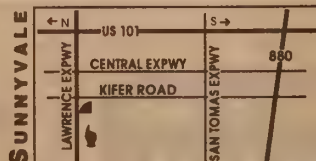


Your Hard Drive & Multimedia Super Source



**NCA**

**Computer Products**



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA**  
CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. Fax (408) 739-2420



# TAPE BACK-UP SUPER SOURCE

## ARCHIVE

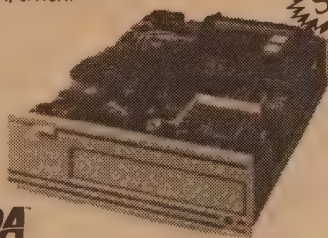
for IBM Compatibles, MAC, SUN, & NeXT



**ANACONDA**

- ◆ 36MB/MIN
- ◆ SCSI-2
- ◆ 1/4" TAPE UNIT

|                     |                      |
|---------------------|----------------------|
| <b>1.3GB 2750</b>   | <b>2.0GB 2800</b>    |
| INTERNAL .....\$799 | INTERNAL .....\$1099 |
| EXTERNAL .....\$899 | EXTERNAL .....\$1199 |



The BEST name in SCSI Back-up Drives

**VIPER**

| 2150          |       | 2525          |       |
|---------------|-------|---------------|-------|
| ◆ 250MB VIPER |       | ◆ 525MB VIPER |       |
| ◆ 6MB/MIN.    |       | ◆ 6MB/MIN.    |       |
| INT.          | EXT.  | INT.          | EXT.  |
| \$349         | \$449 | \$599         | \$699 |

**PYTHON**

| 4324 TURBO PYTHON  |        | 4320NT          |        | 4542NT          |        |
|--------------------|--------|-----------------|--------|-----------------|--------|
| ◆ 4GB DAT 4mm      |        | ◆ 2.0GB DAT 4mm |        | ◆ 4-8GB DAT 4mm |        |
| ◆ 1MB Cache Buffer |        | ◆ 11MB/MIN.     |        | ◆ 11MB/MIN.     |        |
| INT.               | EXT.   | INT.            | EXT.   | INT.            | EXT.   |
| \$1179             | \$1299 | \$1049          | \$1149 | \$1179          | \$1299 |

## EXABYTE®

SUN compatible 8mm SCSI back up system

SCSI-8mm/4mm

| CAPACITY  | MODEL     | SIZE | INTERNAL | EXTERNAL |
|-----------|-----------|------|----------|----------|
| 2.2GB 8mm | EXB-8200  | FH   | \$1499   | \$1749   |
| 2.2GB 8mm | EXB8205   | HH   | \$1499   | \$1799   |
| 5.0GB 8mm | EXB-8500  | FH   | \$2399   | \$2549   |
| 5.0GB 8mm | EXB-8505  | HH   | \$2399   | \$2599   |
| 2.0GB 4mm | EXB-4200  | 3.5" | \$999    | \$1149   |
| 5.0Gb 4mm | EXB-4200c | 3.5" | \$1099   | \$1249   |



**HEWLETT  
PACKARD**

Setting the Standards

SCSI 4mm DAT

| CAPACITY | MODEL     | INTERNAL | EXTERNAL |
|----------|-----------|----------|----------|
| 2.0GB    | 35470 DAT | \$1049   | \$1129   |
| 4-8GB    | 35480 DAT | \$1149   | \$1249   |



**WangDAT™**

SCSI QIC-Format

| CAPACITY | MODEL          | INTERNAL | EXTERNAL |
|----------|----------------|----------|----------|
| 250MB    | 5150 1/4" SCSI | \$399    | \$499    |
| 525MB    | 5525 1/4" SCSI | \$599    | \$699    |

SCSI 4mm DAT

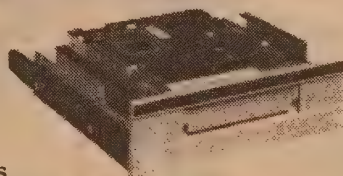
| CAPACITY | MODEL    | INTERNAL | EXTERNAL |
|----------|----------|----------|----------|
| 2.0GB    | 3100 DAT | \$999    | \$1099   |
| 4-8GB    | 3200 DAT | \$1099   | \$1199   |

## TAPE CARTRIDGES

Refer to page 19 of this Catalog



**COLORADO  
MEMORY SYSTEMS INC.**



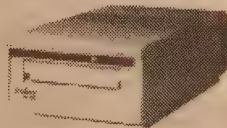
Uses 2120 Tapes

**RUNS OFF FLOPPY PORT**

| CAPACITY | MODEL/TYPE | INTERNAL |
|----------|------------|----------|
| 120MB    | DJ10JUMBO  | \$139    |
| 250MB    | DJ20JUMBO  | \$169    |

|                                          |       |
|------------------------------------------|-------|
| EXTERNAL KIT WITH CARD AND CABLES KE-10  | \$109 |
| EXTERNAL TAPE PORT AB-11                 | \$39  |
| FC-10 TAPE CONTROLLER, WITH CABLES       | \$89  |
| FC-15 HIGH PERFORMANCE 16-BIT CONTROLLER | \$189 |

**Trakker**

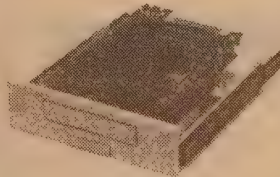


PARALLEL PRINTER PORT EXTERNAL TAPE BACK-UP SYSTEMS

**RUNS OFF PARALLEL PRINTER PORT**

| CAPACITY | MODEL/TYPE  | EXTERNAL |
|----------|-------------|----------|
| 120MB    | TRAKKER 120 | \$289    |
| 250MB    | TRAKKER 250 | \$359    |

**SUMMIT**  
MEMORY SYSTEMS INC.



WITH CENTRAL POINT BACKUP SOFTWARE

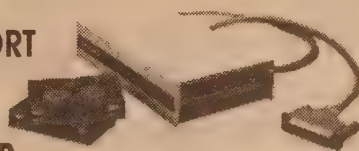
**RUNS OFF FLOPPY PORT**

| CAPACITY | MODEL/TYPE | INTERNAL |
|----------|------------|----------|
| 120MB    | SE-120     | \$135    |
| 250MB    | SE-250     | \$169    |

**MicroSolutions**  
Computer Products

## backpack

PARALLEL PORT  
250MB  
EXTERNAL  
TAPE BACKUP



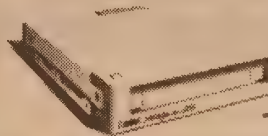
- ▶ QIC 80 Uses 2120 Tapes
- ▶ Software with Unattended Backups
- ▶ Twice as fast as internal tape

**\$329**

**CONNER**

TAPE STOR 250MB TAPE BACKUP  
INCLUDES 1 CARTRIDGE

| INTERNAL                             | EXTERNAL                             |
|--------------------------------------|--------------------------------------|
| RUNS OFF FLOPPY PORT<br><b>\$149</b> | RUNS OFF FLOPPY PORT<br><b>\$339</b> |



**IOMEGA**

TAPE 250

RUNS OFF FLOPPY PORT

- ▶ 250MB Tape Back-up
- ▶ fits Standard 3.5" floppy bay
- ▶ Reads QIC Tape and Irwin tapes
- ▶ Central Point Software
- ▶ Windows Support

**Tape 250 Insider**

EXTERNAL  
PC-POWERED..... **\$319**

**\$189**

EXTERNAL TAPE 250 PARALLEL PORT .....\$389

IOMEGA 250MB Formatted tapes  
Single .....\$29 3Pack .....\$79

**IRWIN**  
An Archive Company

**RUNS OFF FLOPPY PORT**

| CAPACITY | MODEL/TYPE | INTERNAL |
|----------|------------|----------|
| 120MB    | ARC120     | \$139    |
| 250MB    | ARC250     | \$189    |

PARALLEL PRINTER PORT EXTERNAL TAPE BACK-UP

**RUNS OFF PARALLEL PRINTER PORT**

| CAPACITY | MODEL/TYPE   | EXTERNAL |
|----------|--------------|----------|
| 120MB    | AccuTRAK 120 | \$339    |
| 250MB    | AccuTRAK 250 | \$399    |

## BACKUP SOFTWARE

**NovaStor**

BEST BACKUP  
SOFTWARE

| DESCRIPTION                                     | PRICE |
|-------------------------------------------------|-------|
| NovaBack for DOS                                | \$99  |
| NovaBack for OS/2                               | \$149 |
| NovaNet-Server Based Software (up to 100 users) | \$449 |
| Sytos Plus™ for Adaptec (ASW-310)               | \$99  |

Your Hard Drive & Multimedia Super Source

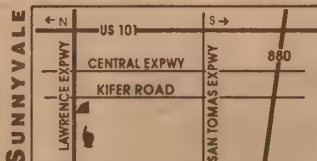


**NCA**

**Computer  
Products**

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# MULTIMEDIA SUPER SOURCE



## MEDIA VISION

### PRO 16 MULTIMEDIA SYSTEM II

- Includes Pro Audio Studio With Voice Recognition
- KARAOKE, Compton Int. Encyclopedia, Mayo Clinic
- Carmen San Diego, Civilization, Battle Chess, Mantis, Action

**\$859**

### PRO AUDIO SPECTRUM 16

- True Stereo Sound
- Advance 20 Voice Stereo Synthesizer
- MIDI Interface
- 7-Software Titles bundle

**\$159**

### EXTERNAL KIT FOR PRO AUDIO SPECTRUM 16

- Conversion Kit to hook up an external SCSI CD ROM
- All Cables - Hardware & Software needed

**\$49**

### PRO AUDIO STUDIO 16

- Above with voice Recognition
- Microphone & Software

**\$199**

### PRO MOVIESTUDIO

- Real Time Video Capture / Real time Compression
- Supports NTSC/PAL/SECAM Comosite and S-Video

**\$329**

### SUBSYSTEM CDPC XL

Fully Integrated Multimedia Component System

- External NEC Multispeed, 280ms, 300Kb/sec 100W Power
- Amplifier, 20W per side & 60W of Power with
- Multimedia Source Analog Mixer
- MIDI Interface
- 4-Operator FM Synthesis
- Microphone
- Top CD-ROM Software Bundle

**\$1079**

SUBSYSTEM CD PC .. \$929

### FUSION CD16

- ProAudio Spectrum 16
- Labtec CS-550 Speakers
- Sony CD-ROM (Int) NEC CD-ROM (Ext)
- Best Selection Software

INTERNAL .. \$469

EXTERNAL .. \$479

### FUSION DOUBLE CD 16

- Internal NEC Double Speed 300KB/SEC
- Includes 7th Guest Software
- ProAudio Spectrum 16

**\$589**

### PROMOVIE SPECTRUM

- Display Live Video In a Movable Window up to 30 frames per second
- Capture Video Sequence
- Control Video Sources With Your Keyboard or Mouse
- No Hardware limitations
- S-Video & NTSC Inputs & Editing
- Software Bundle

**\$269**

PORTABLE PC SOUND AUDIOPORT ..... \$129

MIDI MATE (EXTERNAL MIDI CONNECTOR BOX) ..... \$49

## CREATIVE CREATIVE LABS, INC

### OMNI CD UPGRADE KIT

- CD-ROM: Double Speed 300KB/Sec 350ms Multisession MPC
- Bundled Software: Aldus PhotoStyler & Photo CD Access Quick CD, Audio Player
- Interface Card
- All Cables

**\$299**

### SOUND BLASTER EDUTAINMENT 16 CD UPGRADE KIT

- Sound Blaster 16
- 390ms CD-ROM
- Multimedia Encyclopedia, Animals, San Diego Deluxe, Just Grandma & Me, Sherlock Holmes, Monkey Island, Secret Weapons & Icom.
- Speakers

INTERNAL..... **\$489**

### SOUND BLASTER DISCOVERY 8 CD UPGRADE KIT

- Sound Blaster
- 390ms CD-ROM
- Multimedia Encyclopedia, Animals, & Lemmings

INTERNAL..... **\$379**

### Sound BLASTER

|                                |             |
|--------------------------------|-------------|
| Sound Blaster Deluxe .....     | \$69        |
| Sound Blaster Pro Deluxe ..... | \$109       |
| Sound Blaster 16 /16ASP .....  | \$169/\$199 |
| Video Blaster .....            | \$309       |
| Wave Blaster .....             | \$179       |
| Video Spigot Windows .....     | \$339       |

## AUDIO/VIDEO CARDS



### SOUND PRODUCER PRO

- Speakers & Microphones
- 9 Software Packages

**\$109**

### SOUND WAVE 32

- Advanced Wave Table / DSP 16-Bit Sound Card

**\$199**



Maestro 16 ..... \$169

Maestro 16VR (voice Recognition) ... \$249



DIAMOND

### SONIC SOUND 16-Bit CD QUALITY SOUND CARD

- Digital Signal Processor with Wave Sample; 32 voice synthesis
- Hardware controlled voice recognition; standard SCSI CD ROM interface
- 3 Software Bundle

**\$229**

### AlTech AUDIOSHOW Audio & Video

- VGA to PAL or NTSC; converts computer's output to TV or Video tape
- 16-Bit Stereo Audio with 4-Watt amplifier; CD Quality recording
- CD ROM interface. Joystick port, MIDI In/Out and built-in amplifier

**\$379**



### SOUND MAN 16

Advanced 20 Voice Stereo Synthesizer  
16-Bit

**\$99**

Your Hard Drive & Multimedia Super Source



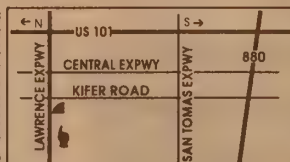
**NCA**

Computer  
Products

POS VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# CD ROM SUPER SOURCE

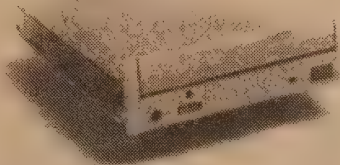
## TOSHIBA

- XM-3401B -



Fastest SCSI CD ROM Ever!!

- ▶ 200ms, 330KB/Sec
- ▶ SCSI CD-ROM
- ▶ Multi-Spin/Multi-Speed
- ▶ 256K Cache



INTERNAL

**\$384**

EXTERNAL

**\$519**

## CHINON

Top of the line SCSI-II CD ROM

CD-535

- ▶ SCSI-II CD ROM
- ▶ Multisession Photo CD
- ▶ XA Compatibles
- ▶ 256K Buffer
- ▶ 280ms
- ▶ Double Doors
- ▶ Sealed Mechanism

INTERNAL UNIT

**\$379**

INTERNAL KIT

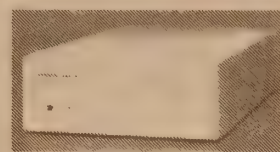
(with card & software)

**\$419**

EXTERNAL

(for MAC & IBM Comp.)

**\$489**



## Panasonic

Office Automation **OA**

### CR522 CD ROM & CARD

- ▶ Includes Audio Card & CABLES
- ▶ 380ms
- ▶ 64K Cache

**\$199**

### CR562 CD ROM & CARD

- ▶ Includes Audio Card & Controller
- ▶ 320ms / 300KB/sec
- ▶ 64K Cache
- ▶ Double Speed / XA Comp.

**\$249**

### CR532 SCSI CD ROM

- ▶ SCSI CD ROM
- ▶ 290ms
- ▶ 128K Cache (up to 256K)

**\$329**

## SONY

- 31A CD ROM
- ▶ CONTROLLER CARD
- ▶ Cables and Software

**\$149**

### 561 SCSI CD ROM

- ▶ Double Speed
- ▶ 285ms / 300Kb/Sec
- ▶ 256K Cache

**\$369**



## NEC

Next Generation SCSI  
fast CD ROMs

- ▶ MultiSpeed
- ▶ MultiSpin
- ▶ MultiSession
- ▶ Higher Performance

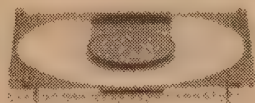


CDR-84-1 **\$399**

EXTERNAL **\$529**

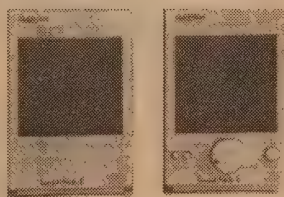
## CD CADDY

**\$5.99**



## SPEAKERS

### Labtec



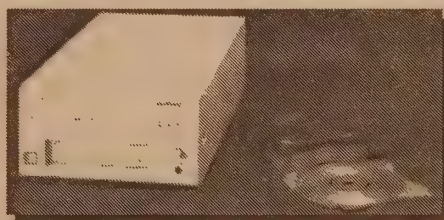
- CS 150 Amplified Speakers .....\$18<sup>99</sup>
- CS 180 2.5" 90 DEGREE PIVOT .....\$22<sup>99</sup>
- CS 550 Amplified Speakers .....\$27<sup>99</sup>
- CS1000 Under Monitor 5watt .....\$89<sup>99</sup>



- ACS50 Mini satellite .....\$74<sup>99</sup>
- ACS100 Satellite, DSP circuitry ....\$129<sup>99</sup>
- ACS300 Multipath acoustic chamber .....\$279<sup>99</sup>

## PIONEER®

High Speed CD-ROM MiniChanger, featuring  
QUADRASPIN™, 612Kbyte/sec



- ▶ External SCSI/SCSI-2 Subsystem
- ▶ 6 CD ROM Magazine
- ▶ Software for MAC or IBM
- ▶ 300ms
- ▶ FAST 612KBytes/Sec

DRM-604X

**\$1199**

## AUDIO CABLES

For Most Popular CD-ROMs  
& Sound Cards

**\$5.99**

## TEAC

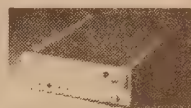
CD-50

SCSI-II Fast CD ROMs

- ▶ DUAL SPEED
- ▶ 265ms / 335Kb/sec
- ▶ Multi session photo CD
- ▶ Anti-dust Construction
- ▶ Caddy & Manual

**\$319**

EXTERNAL  
**\$439**



## TEXEL

- ▶ SCSI CD
- ▶ FAST 265ms
- ▶ Multi-Spin
- ▶ DM-3024
- ▶ Internal W/Caddy

**\$339**

- ▶ DM-5024
- ▶ External W/Caddy

**\$459**



Trantor T130 Controller with SCSI works.....\$79

## MicroSolutions

Computer Products

### backpack CD-ROM drive



### Parallel Port External CD-ROM Drive

- ▶ 128K Cache
- ▶ 350ms
- ▶ MultiSession Photo CD
- ▶ Ideal for Notebooks
- ▶ Device Drivers

**\$369**



## MITSUMI

- ▶ MULTIMEDIA CD ROM 350ms.
- ▶ INCLUDES 16 BIT CARD
- ▶ MPC READY / 350ms

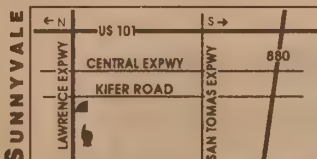
**\$149**

Your Hard Drive & Multimedia Super Source



# NCA

Computer  
Products



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420



# CD ROM TITLES SUPER SALE

**CHOOSE FROM ANY OF THE FOLLOWING  
CD-TITLES FOR ONLY...**

COMPACT  
**disc**

**\$9.99**

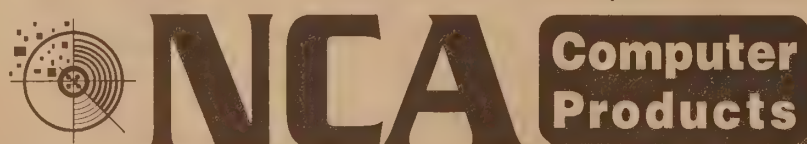
1001 Utilities  
Business Assistant  
California Collection  
Desktop Bookshop  
Game Arena  
Jokes & Pranks  
Learning Adventure  
Mother of All Clipart  
Original Shareware  
Phoenix Ver. 3.0  
Selectware  
VGA Spectrum  
Futura  
Let's Play  
Oldies but Goodies  
Variety Store  
Brain Drain  
Mirror Mirror  
American Business Phonebook 92"  
Clipart Heaven  
Learning Heaven  
Shareware Heaven  
Windows Plus  
International Intelligence Fact Book  
World Traveler  
Windoware  
Too Many Typefonts  
Technotools  
Sound Sensations

Shareware Overland  
Our Solar System  
Ham Radio  
Encyclopedia of Sound  
Dictionaries & Languages  
Deathstar Arcade Battles  
Complete Bookshop  
Clipart Goliath  
Bibles & Religion  
Gardening  
Computer Reference Library  
Dr. Windows  
Dr. Games  
Dr. Shareware  
Dr. Music  
Simtel MSDOS  
CICIA MS Windows  
Hobbes OS/2  
Aminet Amiga  
Garbo MS-DOS/MAC  
Sprite OS  
QRZ! Ham Radio

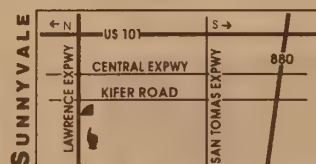


- ▶ Over 50 new MAC CD-ROM titles just arrived.
- ▶ Over 200 CD-ROM Titles for PC in stock to choose from.
- ▶ Entertainment, ▶ Shareware, ▶ Games, ▶ Education, ▶ Business, & ▶ Adult Titles.

Your Hard Drive & Multimedia Super Source



POS VISA MasterCard DISCOVER AMERICAN EXPRESS Price subject to change without notice. Limited quantity on Special Items Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



1202 Kifer Rd. & Lawrence Expway  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# VIDEO SUPER SOURCE

## MONITORS VIDEO CARDS

### ViewSonic®

State of the Art

The New Generation

**ViewSonic-15 15" .28dpi .....\$499**

ViewMatch Color Monitor, 1280X1024, Non-Interlaced  
76Hz at 1024X768, Flat Screen

**ViewSonic-17 17" .28dpi .....\$1079**

76Hz at 1280X1024, Flat Square Screen

**ViewSonic-20 20" .28dpi .....\$1795**

1600X1280, Non-Interlaced, Dual Page Display

**ViewSonic-21 21" .....\$1795**

**U-SYNC 14" NON-INT. SVGA**

.28 dpi 1024X768@72Hz .....\$259

**MITAC**

Affordable Quality Monitors

**14" SVGA Non-Interlaced .....\$269**

1024X768, .28dpi

**15" SVGA Non-Interlaced .....\$399**

1280X1024, .28dpi, flat screen Digital Control

**17" SVGA Non-Interlaced .....\$699**

1280X1024, .26dpi

**MGC**

**14" SVGA 1024X768 Non-Interlaced ...\$309**

XGA High-Frequency, .28dpi

**15" SVGA Flat Screen Non-Interlaced.\$399**

XGA High Frequency, .28dpi, up 1280X1024 Non-Internal

**14" SVGA Black 1024X768 .....\$289**

**SONY**

**CPD 1430 14" SVGA .25dpi .....\$599**

**CPD 1730 17" SVGA .25dpi .....\$999**

**GDM2038 20" State-of-the-art .....\$2294**



**NEC**

**3FGc 15" 1024X768@60Hz .....\$599**

**4FGc 15" 1024X768@76Hz .....\$699**

**5FGc 17" 1024X768@76Hz .....\$1099**

**5FG 17" 1280X1024@74Hz .....\$1449**

**6FG 21" 1280X1024@74Hz .....\$2399**



**SAMSUNG**

Electronics

High Quality Monitors for Less

**SyncMaster-15C 15" Multisync .....\$454**

.28dpi, Flicker-Free, Microprocessor Controls flat screen  
1024X768 non-interlaced

**SyncMaster-5 17" MultiSync High-freq. ...\$799**

.28dpi, 1024X768, Non-Interlaced

**SyncMaster-5+ 17" 1280X1024 .....\$895**

.26dpi, Flicker-Free, MultiSync

**NANAO®**

PROFESSIONAL VIDEO DISPLAY

**F340iw 15" Non-Int. flat screen .....\$679**

**F550i 17" Non-Int. 1280X1024, .28dpi .....\$999**

**F550iw 17" Non-Int. 1280X1024, .28dpi .....\$1119**

**T560i 17" Non-Int. 1280X1024, .25dpi .....\$1694**

**T660i 20" Trinitron Tube 1280X1024, .28dpi .....\$2499**

**T750i 21" Non-Int. 1280X1024, .32dpi .....\$2039**

**F760i 21" 1280X1024™ 74Hz, .31dpi .....\$2095**

## VIDEO CARDS



**SPiDER**  
Graphics, Inc.

**SPiDER Windows Accelerator**

16.7 Million Colors

**SPiDER 32VLB**

- ▶ VESA Local Bus
- ▶ 1280X1024 In 256 Colors
- ▶ 1024X768 @ 72Hz

1MB DRAM

2MB DRAM

**\$95**

**\$139**

**SPiDER 32VLB Pro**

- ▶ ABOVE CARD WITH
- ▶ 20% Faster Acceleration

1MB DRAM

2MB DRAM

**\$119**

**\$169**

**BLACK WIDOW**

- ▶ VESA Local Bus
- ▶ XGA Graphics Engine
- ▶ Fast VRAM - 32-Bit OS/2 2.1 Drive Support  
up to 100Hz Refresh rate

1MB VRAM

2MB VRAM

**\$209**

**\$265**



**Number Nine**  
Computer Corporation  
Excellence in PC Graphics

**9Gxe World's Fastest Graphics Accelerator Engine**  
86C928 Chip Based

**9Gxe Level 10 ISA 1MB VRAM .....\$259**

**9Gxe Level 11 ISA or VESA 2MB VRAM .....\$369**

**9Gxe Level 12 ISA or VESA 3MB VRAM .....\$449**

**9Gxi Graphics Powerhouse Bases on Ti TMS 34020**

**9Gxi Lite Level 20 1MB VRAM .....\$539**

**9Gxi Lite Level 21 1MB VRAM /1MB DRAM .....\$699**

**9Gxi Level 23 ISA or MCA 1MB VRAM/1MB DRAM .....\$999**

**9Gxi Level 25 ISA or MCA 2MB VRAM/1MB DRAM .....\$1269**

**9Gxi Level 29 4MB VRAM 1MB DRAM .....\$1449**

**15-Pin To 5BNC Monitor Cable .....\$89**

**Graphic Ultra+**

Windows Accelerator MACH32  
16.7 Million Colors

1MB DRAM

2MB DRAM

**\$209**

**\$239**

With ATI Bus  
Mouse add \$29

**Graphic Ultra Pro**

- ▶ Accelerated 1024X768 at 256 Colors,  
up to 74Hz, Non-Interlaced

1MB VRAM

2MB VRAM

**\$329**

**\$339**

With ATI Bus  
Mouse add \$29

**Graphics Ultra Pro 2MB EISA .....\$419**

**Graphics Ultra Pro VLB**

VESA Local Bus Mach 32

1MB VRAM

2MB VRAM

**\$299**

**\$349**

**DIAMOND**

**Stealth Pro 1MB/2MB ISA .....\$249/\$349**

**Stealth Pro 1MB/2MB VLB .....\$259/\$359**

**SpeedStar Pro VESA or ISA .....\$139<sup>99</sup>**

**Stealth 24 VESA or ISA 1280X1024 .....\$169<sup>99</sup>**

**Viper VLB 2MB VRAM Accelerator .....\$389<sup>99</sup>**



**ORCHID**

High End Video Solutions

**Celsius 1MB VRAM/2mb .....\$229/\$289**

**P9000 VESA 2MB VRAM&1MB DRAM ....\$349**

**Fahrenheit 1280 Plus 1MB .....\$154**

**Fahrenheit 1280 Plus VLB 1MB .....\$169**

**Fahrenheit VA or VA/VLB 1MB .....\$179**

**SVGA VIDEO CARDS**

**SVGA 256K Video Card .....\$29<sup>99</sup>**

**SVGA 512MB 1024X768 .....\$44<sup>99</sup>**

**SVGA 1024K 1024X768 .....\$59<sup>99</sup>**

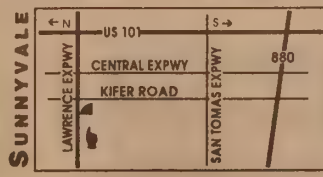
**SVGA VESA Local Bus .....\$79<sup>99</sup>**

Your Hard Drive & Multimedia Super Source



**NCA**

**Computer Products**



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA**  
CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420

POs VISA MasterCard DISCOVER AMERICAN EXPRESS Price subject to change without notice. Limited quantity on Special Items Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



# MEMORY

# MOTHERBOARDS

## MEMORY SIMMS

## MOTHERBOARDS

### IBM COMPATIBLE



|        |      |       |        |
|--------|------|-------|--------|
| 256X9  | 80ns | 3Chip | \$Call |
| 1MBX9  | 80ns | 3Chip | \$Call |
| 1MBX9  | 80ns | 9Chip | \$Call |
| 1MBX9  | 70ns | 3Chip | \$Call |
| 1MBX9  | 70ns | 9Chip | \$Call |
| 1MBX9  | 60ns | 3Chip | \$Call |
| 1MBX9  | 60ns | 9Chip | \$Call |
| 4MBX9  | 80ns | 9Chip | \$Call |
| 4MBX9  | 70ns | 9Chip | \$Call |
| 4MBX9  | 60ns | 9Chip | \$Call |
| 16MBX9 | 70ns | 9Chip | \$Call |

### Macintosh



|        |      |       |        |
|--------|------|-------|--------|
| 1MBX8  | 80ns | 2Chip | \$Call |
| 1MBX8  | 80ns | 8Chip | \$Call |
| 1MBX8  | 70ns | 2Chip | \$Call |
| 1MBX8  | 70ns | 8Chip | \$Call |
| 2MBX8  | 80ns | 2Chip | \$Call |
| 4MBX8  | 80ns | 8Chip | \$Call |
| 4MBX8  | 70ns | 8Chip | \$Call |
| 4MBX8  | 60ns | 8Chip | \$Call |
| 4MBX8  | 80ns | II-FX | \$Call |
| 16MBX8 | 70ns | 8Chip | \$Call |



### DIAMOND

- ▶ VESA Local Bus
- ▶ ZIF Socket
- ▶ Up to 128MB on Board Using
- ▶ 72-Pin Simms
- ▶ 256K Write-Back Cache
- ▶ 2 IDE / 2 Floppy / I/O on Board (NO CPU)

**486DX33 or DX2/66**  
**\$249**

### MICRONICS

**486 DX33 VESA 256K (ZIF Socket) \$649**  
**486 DX33 EISA/VESA 256K ...\$899**  
**486 DX50 EISA 8 Slots, 256K \$1049**  
**486DX/2-66 VESA, ZIF Socket, 256K \$Call**  
**486 DX/2-66 EISA/VESA 256K ..\$1299**



### Super Voyager

**486DX33 VESA 256K.....\$789**  
**486DX50 VESA 256K.....\$939**  
**486DX/2-66 VESA 256K \$1129**

### Enterprise III

**486DX33 EISA/VESA 256K ....\$899**  
**486DX50 EISA/VESA 256K \$1099**  
**486DX2/66 EISA/VESA 256K\$1239**

### DIPS

|                   |               |
|-------------------|---------------|
| 256X1 100ns       | \$1.79        |
| 256X1 80ns        | \$1.59        |
| 256X1 70ns        | \$1.89        |
| <b>256X4 70ns</b> | <b>\$4.89</b> |
| 64X4 100ns        | \$3.39        |
| 64X4 80ns         | \$2.29        |
| 1X4 80ns          | \$16.99       |
| 1MBX1 100ns       | \$3.75        |
| 1MBX1 80ns        | \$3.39        |
| 1MBX1 70ns        | \$4.29        |
| 1MBX1 60ns        | \$4.39        |

### CACHE MEMORY

|          |         |
|----------|---------|
| 32X8-25  | \$6.50  |
| 32X8-20  | \$8.50  |
| 32X8-15  | \$17.00 |
| 32X8-12  | \$39.00 |
| 64X4-25  | \$8.50  |
| 64X4-20  | \$9.00  |
| 64X4-15  | \$18.00 |
| 64X1-20  | \$5.75  |
| 64X1-15  | \$6.75  |
| 8X8-25   | \$3.75  |
| 8X8-20   | \$3.25  |
| 8X8-15   | \$4.75  |
| 16X4-20  | \$6.25  |
| 16X4-25  | \$4.75  |
| 16X4-15  | \$8.25  |
| 128X8-25 | \$41.50 |
| 128X8-20 | \$CALL  |
| 128X8-15 | \$CALL  |

### MEMORY SIPPS

|        |        |
|--------|--------|
| 1X9/70 | \$Call |
| 1X9/60 | \$Call |

### INTEL CPUs

|               |        |
|---------------|--------|
| 486DX-33MHz   | \$Call |
| 486DX-50MHz   | \$Call |
| 486DX/2-50MHz | \$Call |
| 486DX/2-66MHz | \$Call |

### LASER PRINTER MEMORY

|                                    |                        |
|------------------------------------|------------------------|
| <b>HP laser Jet 4 &amp; 4M</b>     | <b>HEWLETT PACKARD</b> |
| 4MB                                | \$Call                 |
| 8MB                                | \$Call                 |
| <b>HP Laser Jet IIP, III, IIID</b> |                        |
| 2MB Board (up to 4MB)              | \$Call                 |
| 4MB Board                          | \$Call                 |
| <b>HP IIIsi</b>                    |                        |
| 4MB Module                         | \$Call                 |
| 8MB Module                         | \$Call                 |
| <b>OTHER LASER PRINTERS</b>        |                        |
| PANASONIC P4410/4430 Printers      |                        |
| Compaq Page MRQ Printers           |                        |
| EPSON Action II Printers           |                        |
| OKI 400 Printers & NEC Printers    |                        |

### 32-BIT FOR QUADRA 800, CENTRIS, & LCIII

|             |        |
|-------------|--------|
| 2MB Module  | \$Call |
| 4MB Module  | \$Call |
| 8MB Module  | \$Call |
| 16MB Module | \$Call |

### MAC MEMORY INSTALLATION

**2-Hr Installation \$15**  
(excluding Powerbooks)

### POWERBOOK MEMORY

|                           |        |
|---------------------------|--------|
| 6MB Module (160/180)      | \$CALL |
| 8MB Module (160/180)      | \$CALL |
| 10MB Module (160/180)     | \$CALL |
| 6MB Modules (140/145/170) | \$CALL |

### 72-PIN SIMMS

|                |        |
|----------------|--------|
| 2MB 604-70ns   | \$CALL |
| 4MB 1X36-70ns  | \$CALL |
| 8MB 2X36-70ns  | \$CALL |
| 16MB 4X36 70ns | \$CALL |

### MATH CO-PROCESSORS



**Co-processor for 386-DX16, 20, 25, & 33MHz \$59**  
**intel.**

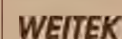
|                        |        |
|------------------------|--------|
| 80387SX-16, 20, 25     | \$79   |
| 80387DX-16, 20, 25, 33 | \$79   |
| Overdrive Processor    | \$Call |



|                   |      |
|-------------------|------|
| 3C87SX-16, 20, 25 | \$69 |
| 3C87SX-33         | \$79 |
| 3C87-20, 25, 33   | \$79 |
| 3C87-40           | \$79 |



|                      |      |
|----------------------|------|
| 83S87SX-16, 20, 25   | \$69 |
| 83S87SX-33           | \$79 |
| 83D87-16, 20, 25, 33 | \$79 |
| 83D87-40             | \$89 |



|                       |       |
|-----------------------|-------|
| 4167-25               | \$359 |
| 4167-33 W/Manual & SW | \$629 |

### Alaris

**Manufactured By IBM**  
**3 Year Warranty**

- ▶ VESA Local Bus
- ▶ 128K Cache
- ▶ Includes Co-Processors
- ▶ 16K Internal Cache

**486SLC2-50, 19.8mips ..\$339**  
**486SLC2-66, 26.2mips ..\$399**

*NCA's Super-Quality Boards*

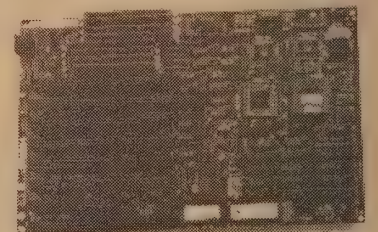
### Elite UM 486V

**VESA - Local Bus Motherboard**

- ▶ 8 16-Bit Slots INCLUDES
- ▶ 2 32-Bit VESA Slots
- ▶ 256K Cache
- ▶ ZIF 238-pin Socket (Pentium over drive ready)
- ▶ UMC Chip Set
- ▶ AMI BIOS
- ▶ Jumper Adjustable speed

**486DX-33 .....\$489**  
**486DX-50 .....\$609**  
**486DX/2-50 .....\$589**  
**486DX/2-66 .....\$699**

### HIGH QUALITY, HIGH PERFORMANCE MOTHERBOARDS



|                               |       |
|-------------------------------|-------|
| 386SX-33MHz                   | \$149 |
| 386DX-40MHz w/CPU, 64K Cache  | \$149 |
| 386DX-40MHz w/CPU, 128K Cache | \$159 |
| 386DX-40MHz w/CPU, 256K Cache | \$169 |
| 486DLC/40 Cyrix               | \$229 |
| 486DLC/40 w/Co-Pro Cyrix      | \$269 |

### 486 EISA/VLB

- ▶ 3-EISA - Slots
- ▶ 2-VESA - Slots
- ▶ 3 16-Bit ISA Slots
- ▶ Hint Chip Set

**\$239**

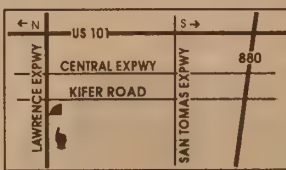
Your Hard Drive & Multimedia Super Source



# NCA

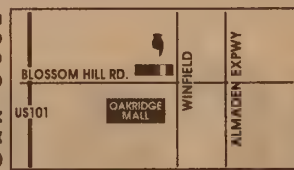
## Computer Products

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610



Corporate, Dealer, Government, Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420



# ACCESSORIES SUPER SOURCE

## CASES

### EXTERNAL SCSI DRIVE CASES



- High Quality Metal Cases
- 2 Centronics Output
- Noise-Free Fan
- External SCSI ID Switch
- External SCSI Cable (50C-50C or 50C-25C)
- Power Cable
- Hardware

For 3.5" or 5.25" Half Height .....\$99  
 For Full Height or 2 HH (NCA) .....\$199  
 For 2 Full Height 200W with 5-fans .....\$279  
 For 4 Full Height With Panel .....\$499

### SPECIAL

While Supplies Last

#### External SCSI Case

Small Case with Power Supply for 3.5" SCSI Drives

**\$65**

#### External IDE Case

Includes cables, Power Supply & All Needed Hardware

**\$65**

### POWER SUPPLIES

250Watt UL approved AT .....\$49  
 250Watt UL for Tower .....\$49  
 400Watt UL for Tower .....\$179



### COMPUTER CASES

- HIGH QUALITY CASES
- UL APPROVED POWER SUPPLY
- GREAT STYLE SELECTION



#### NCA SERIES™

| DESCRIPTION      | PRICE    |
|------------------|----------|
| MINI-TOWER, 230W | \$79.99  |
| MED-TOWER, 230W  | \$99.99  |
| FULL-TOWER, 250W | \$139.99 |

#### BETA SERIES™

| DESCRIPTION      | PRICE    |
|------------------|----------|
| MINI-TOWER, 230W | \$49.99  |
| MED-TOWER, 230W  | \$79.99  |
| FULL-TOWER, 250W | \$109.99 |

## POINTING DEVICES



Buy a Specially Marked Package of MousMan™ & get another Mouse FREE\*

MouseMan.....\$49<sup>99</sup>

Serial MouseMan Bus Ver. ....\$62.99



\*handed through logitec

| NAME               | PRICE              |
|--------------------|--------------------|
| FIRST-MOUSE        | \$36 <sup>99</sup> |
| TrackMan-II        | \$74 <sup>99</sup> |
| MOUSE-MAN Cordless | \$84 <sup>99</sup> |
| KIDSMOUSE          | \$29 <sup>99</sup> |

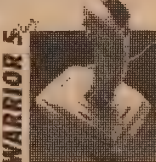
| NAME                 | PRICE               |
|----------------------|---------------------|
| SoundMan 16          | \$99 <sup>99</sup>  |
| ScanMan 256 with OCR | \$199 <sup>99</sup> |
| ScanMan 32           | \$99 <sup>99</sup>  |

### Microsoft

| NAME                   | PRICE |
|------------------------|-------|
| Microsoft Mouse OEM    | \$49  |
| Microsoft Mouse II OEM | \$59  |



**WARRIOR 5** DELUXE ANALOG JOYSTICK FOR IBM PC COMPATIBLE **\$14<sup>99</sup>**



Smart Game Card  
 2-Game ports  
 Selectable Speed .....\$16<sup>99</sup>  
 Star Fighter 5  
 Control Center .....\$9<sup>99</sup>  
 Sound Mate II  
 Amplified Speakers .....\$19<sup>99</sup>

## CABLES

### HARD DRIVE EXTERNAL CABLES

| DESCRIPTION                         | PRICE   |
|-------------------------------------|---------|
| CENTRONICS TO SCSI-II               | \$39.99 |
| CENTRONICS TO MAC 25-PIN            | \$7.99  |
| CENTRONICS 50 TO CENTRONICS 50, 6FT | \$12.99 |
| CENTRONICS 50 TO CENTRONICS 50, 3FT | \$9.99  |
| CENTRONICS TO DB-50                 | \$39.99 |
| DB-50 TO SCSI-II                    | \$39.99 |
| DB-50 TO DB-50                      | \$39.99 |
| SCSI-II TO SCSI-II                  | \$39.99 |

### HARD DRIVE INTERNAL CABLES

| DESCRIPTION                    | PRICE   |
|--------------------------------|---------|
| SCSI 50-PIN RIBBON 3 CONNECTOR | \$5.99  |
| SCSI 50-PIN RIBBON 4 CONNECTOR | \$9.99  |
| SCSI 50-PIN RIBBON 5 CONNECTOR | \$12.99 |
| IDE 40-PIN RIBBON 3 CONNECTORS | \$3.99  |
| FLOPPY & IDE CABLE SET         | \$5.99  |

## MEDIA

### TAPES & CARTRIDGES



| DESCRIPTION                   | SINGLE | 5-PACK |
|-------------------------------|--------|--------|
| 2120 (120/250MB)              |        |        |
| SONY DC2120 120/250MB         | 18.95  | 89.00  |
| 3M 2120F FORMATTED XMAT       | 18.00  | 89.00  |
| MAXELL DC2120 UNFORMATTED     | 16.99  | 79.00  |
| MAXELL DC2120 FORMATTED Q8019 | 19.99  | 89.99  |

### 6000(1/4" TAPES)

|                   |       |        |
|-------------------|-------|--------|
| SONY DC6150 150MB | 22.95 | 107.50 |
| SONY DC6250 250MB | 28.95 | 137.50 |
| SONY DC6525 525MB | 33.95 | 155.50 |

### DAT 4mm 90meters

|            |       |       |
|------------|-------|-------|
| SONY 90M   | 17.95 | 75.00 |
| TDK DC4-90 | 13.99 | 65.00 |

### DAT 8mm 112meters

|                           |       |       |
|---------------------------|-------|-------|
| EXABYTE UP TO 5.0GB TAPES | 18.00 | 89.00 |
| TDK DC8-112               | 9.99  | 45.00 |

### FLOPPY DISKS

|                           |                     |
|---------------------------|---------------------|
| SONY 2.88M DISKS          | 10PACK ONLY \$62.50 |
| BULK 1.44M 3.5" FORMATTED | .68¢ 25PACK \$17.99 |
| BULK 1.2M 5.25" FORMATTED | .39¢ 25PACK \$9.99  |

### REMOVABLE DISKS

|                              |           |       |
|------------------------------|-----------|-------|
| SYQUEST 44MB                 | \$65.00   | \$309 |
| SYQUEST 88MB                 | \$99      | \$489 |
| SYQUEST 105MB 3.5"           | \$99      | \$489 |
| BERNOULLI                    | SEE pg. 9 |       |
| RICOH 128MB                  | \$49      | 239   |
| MAXEL 128MB OPTICAL          | \$42      | 199   |
| MAXOPTIX 1.0GB GLASS OR POLY | \$199     | 979   |
| RICOH 650MB                  | \$145     | \$699 |

## KEYBOARDS

### KEYBOARDS

| DESCRIPTION                   | PRICE   |
|-------------------------------|---------|
| MITSUMI High Quality Keyboard | \$29.99 |
| MITSUMI BLACK                 | \$49.99 |
| MAX STANDARD 101 KEY          | \$19.99 |
| ALPS SWITCH CLICK STYLE       | \$39.99 |

### FOCUS

| DESCRIPTION                               | PRICE   |
|-------------------------------------------|---------|
| FOCUS 2000 W/COVER                        | \$42.99 |
| FOCUS 8000 with Calculator                | \$49.99 |
| FOCUS 9000 with Calculator / programmable | \$69.99 |

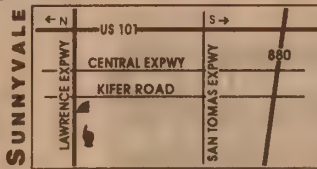
### CPU COOLING FAN \$9<sup>99</sup>

Your Hard Drive & Multimedia Super Source

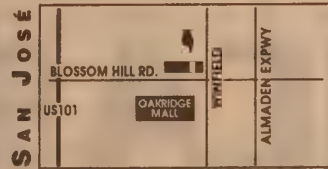


# NCA

## Computer Products



1202 Kifer Rd. & Lawrence Expwy  
 Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
 (408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
 Mon-Sat 10am-7pm; Sun 11am-6pm  
 (408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government, Educational, & International:

(408) 522-8672  
 P.O. FAX(408) 739-2420

POs VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
 Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



# FAX / MODEM SUPER SOURCE

COMPUTER PERIPHERALS, INC.™



## 14.4/FAX



14,400 bps V.32 / V.42 bis Modem  
with 14,400 bps SEND/REC. FAX

with DOS and WINDOWS Ver. Communication Software

- 100% Hayes Enhanced AT Command Set Compatible
- V.32bis (57,600 bps Maximum throughput speed)
- V.42bis and MNP 5 data compression
- V.42 and MNP 2-4 error Correction
- Auto-baud negotiation
- Fax from with any DOS application
- WYSIWYF (what you see is what you fax)
- Auto COM Port detection
- Near laser printer quality output  
with PCL4 support

**INTERNAL**

**\$159**

**EXTERNAL**

**\$179**



**VIVA 14.4 FAX MAC**

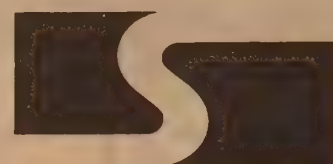
With FAXsft Software

**\$189**

## ViVa 14.4 Pocket FAX-MODEM

14,400 bps Pocket size modem  
with 14,400 bps SEND / REC FAX  
includes: WINFAX  
& Communication Software

**\$239**



Supra Corporation®



## Supra FAX Modem

14,400 bps Fax, 14,400 bps Data/V.42bis / MNP5  
57,600 bps throughput/ Class 1 Fax, Caller ID

### 14.4LC Internal

14.4 Fax/Modem for PC

Software Included:

COMit (DOS & Windows)  
WinFax Lite (Windows)  
FaxTalk (DOS)

**\$139**

### 14.4LC External

14.4 Fax/Modem for PC

Software Included:

COMit (DOS & Windows)  
WinFax Lite (Windows)  
FaxTalk (DOS)

**\$159**

### 144LC Ext. MAC

14.4 Fax/Modem for MAC

Software Included:

Microphone LT  
FAXstf  
CompuServe Information Manager  
ARA Scripts  
Cables and Manual.

**\$179**

### 144PB Int. MAC

14.4 Fax/Modem for PowerBook

**\$CALL**

Your Hard Drive & Multimedia Super Source



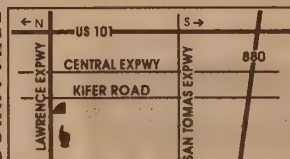
**NCA**

**Computer Products**

POS VISA MasterCard DISCOVER AMERICAN EXPRESS

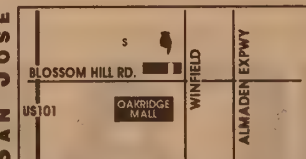
Price subject to change without notice, Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA**  
CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420



# FAX / MODEM SUPER SOURCE

## USRobotics®

The Intelligent Choice in Data Communications

FIVE YEAR WARRANTY

### HIGH SPEED FAX/MODEMS

## SPORTSTER 14,400 V.32/V.42

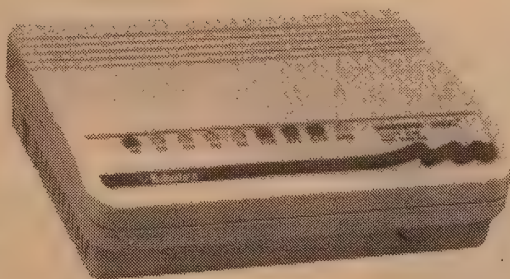
WITH WINFAX LITE SOFTWARE



### FREE

The Sierra Network Start-up Kit

- First 3 hours of access free
- 4 3.5"-disk set



**INTERNAL**

**EXTERNAL**

## \$165

## \$185

## MAC&FAX SPORTSTER 14.4

External 14.4 Fax/Modem  
W/ Fax *stf*™ software for MAC

## \$209



## Fax MODEM

### 14,400bps FAX/MODEM

MNP 5 / V.42bis

- With Quick Link II FAX/Communication for DOS

**INTERNAL**

## \$179

External.... \$199



- With Windows Ver. DOS Software with Prodigy Kit

**INTERNAL**

## \$189

- 2400bps FAX Modem (9600bps FAX send&Receive) with Windows Ver. Software & Prodigy Kit

**INTERNAL**

## \$69



## Hayes® EXTERNAL 2400 BAUD MODEM

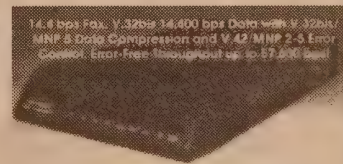
WITH SOFTWARE

## \$39

## NCA BARRACUDA 14.4FX

### EXTERNAL 14.4 Fax/Modem

Elegant Slimline Metal Case  
Includes QuickLink II Software



### EXTERNAL PC

## \$139

### EXTERNAL MAC

## \$149

Includes Cables for MAC (no software) Supported by most third party Fax/Modem Software

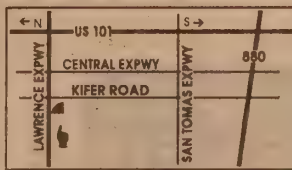
Your Hard Drive & Multimedia Super Source



# NCA

## Computer Products

SUNNYVALE



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420

SAN JOSE



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

## NCA CORPORATE

Corporate, Dealer, Government, Educational, & International:

(408) 522-8672  
P.O. FAX (408) 739-2420

POS VISA MasterCard DISCOVER AMERICAN EXPRESS Price subject to change without notice. Limited quantity on Special Items Not responsible for type errors. Expires Oct 22<sup>nd</sup>, 1993



# PCMCIA SUPER SOURCE

## FlashCard

PCMCIA Mass Storage For Mobile Computers



**Seagate**

**SunDisk**  
The Solid Advantage

**hp HEWLETT  
PACKARD**

### HP 95LX

Kit Includes:  
FlashCard, Communication Cable,  
Software Drivers



|                            |       |
|----------------------------|-------|
| 2.6MB FlashCard Kit .....  | \$399 |
| 5.2MB FlashCard Kit .....  | \$499 |
| 10.4MB FlashCard Kit ..... | \$749 |

**hp HEWLETT  
PACKARD**

### HP 100LX OmniBook

FlashCard Only: No Software Needed



|                        |        |
|------------------------|--------|
| 2.6MB FlashCard .....  | \$339  |
| 5.2MB FlashCard .....  | \$419  |
| 10.4MB FlashCard ..... | \$649  |
| 20MB FlashCard .....   | \$1199 |

**e○, Inc.**

### Personal Communication 440 & 880

FlashCard Only: No Software Needed



|                        |        |
|------------------------|--------|
| 2.6MB FlashCard .....  | \$339  |
| 5.2MB FlashCard .....  | \$419  |
| 10.4MB FlashCard ..... | \$649  |
| 20MB FlashCard .....   | \$1199 |

**NCR**

### 3170 Safari

Kit Includes:  
FlashCard & Software Drivers



|                            |        |
|----------------------------|--------|
| 2.6MB FlashCard Kit .....  | \$339  |
| 5.2MB FlashCard Kit .....  | \$419  |
| 10.4MB FlashCard Kit ..... | \$649  |
| 20MB FlashCard Kit .....   | \$1199 |

**GRiD**

### Convertible 386 Convertible 486

Kit Includes:  
FlashCard & Software Drivers



|                            |       |
|----------------------------|-------|
| 2.6MB FlashCard Kit .....  | \$399 |
| 5.2MB FlashCard Kit .....  | \$499 |
| 10.4MB FlashCard Kit ..... | \$749 |

**GVC**

The Name You Can Trust



### Fax/modem For PCMCIA Type 2.0

With QuickLink II Software

- ▶ 9600bps Send Fax
- ▶ 4800bps Receive Fax
- ▶ 2400bps Data

**\$179**

TESTED WITH Acer (Anywhere V366SL), AST (PowerExec 3/25SL), AST (PowerExec ColorPlus 4/25SL), Data General (Walkabout 366SL), Dauphin (5000 Series), Dell (320SL), GRiD (Convertible), Hyundai (Couriers), NCR (3170 Safari), PC&C Research (SLC 4000), Sharp (PC-6700 Series & PC-6800 Series), Toshiba (T3300SL, T4500, T4500C, & Zenith z-Lite 320L)

**ACE**  
ACE Technologies, Inc.

### DoubleCard

PCMCIA RAM memory card With  
built-in Data Compression

### for HP 95LX & 100LX



- Auto-mounting
- Password protection
- Available in 1MB, 2MB, 4MB, & 8MB
- FREE DoubleRAM utility doubles your Palmtop's internal RAM disk!
- DoubleCards are all preformatted for simple installation
- Lifetime Warranty

|                                     |       |
|-------------------------------------|-------|
| DoubleCard 1M (up to 1MB) A2001 ... | \$119 |
| DoubleCard 2M (up to 2MB) A2002 ... | \$189 |
| DoubleCard 3M (up to 3MB) A2004 ... | \$299 |

### DoubleFlash

Solid State Storage Solutions for  
Portable Computers. Built-in Data  
Compression



|                                         |        |
|-----------------------------------------|--------|
| DoubleFlash 10M (up to 10MB) A3010 .... | \$499  |
| DoubleFlash 20M (up to 20MB) A3020 .... | \$759  |
| DoubleFlash 40M (up to 40MB) A3040 ..   | \$1249 |

(for HP 100LX only)

Your Hard Drive & Multimedia Super Source

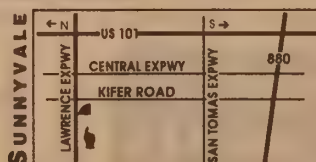


**NCA**

**Computer  
Products**

POS VISA MasterCard DISCOVER AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA  
CORPORATE**

Corporate, Dealer, Government,  
Educational, & International:

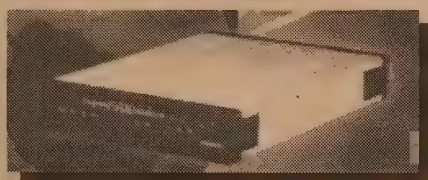
(408) 522-8672  
P.O. FAX (408) 739-2420



# Macintosh PERIPHERALS

## EXTERNAL FAX/MODEMS FOR MAC

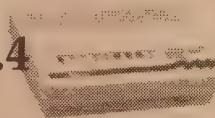
**SupraFAXModem™**



**Robotics®**

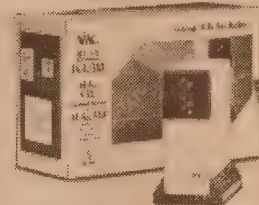
The Intelligent Choice in Data Communications

Mac&Fax 14.4



**COMPUTER PERIPHERALS, INC.™**

ViVi 14.4



14,400 bps Fax/Data

EXTERNAL INCLUDES

- Microphone LT
- Fax stf
- Cables & Manual

**\$179**

14,400 bps Fax/Data

INCLUDES

- Fax Software
- Cables

**\$209**

- 14,400 bps V.32/V.42 bis Modem
- 14,400 bps Send/Rec. Fax

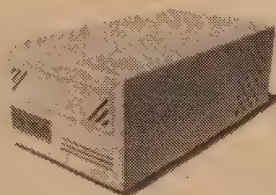
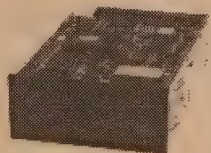
**\$189**

## HARD DRIVES Internal & External for MAC



**\$79 VALUE**

**FWB**  
incorporated



The best Disk Formatting Software

Only \$10 with any purchase of a Hard Drive From NCA

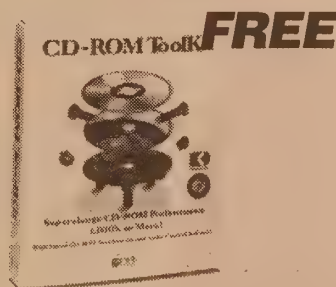
100's of Options

**85MB-24GB Array**

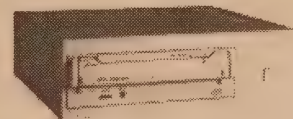
See pages 4, 5, 6, 7, 8 for all listing  
On Int. & Ext. SCSI Drives

## EXTERNAL CD ROMS

Included with our CD ROMs for MAC



**FWB**  
incorporated



Includes FWB CD-ROM Drivers and Cables for MAC.

- External Toshiba 3401B 200ms .....\$529
- External NEC 84-1, 280ms .....\$559
- External CHINON 535, 280ms .....\$499
- External TEAC CD50, 265ms .....\$459
- External TEXEL 3204, 280ms .....\$469
- External Pioneer 6CD .....\$1199

Supercharge CD-ROM Performance 1,000% or More!

## MEMORY SIMMS



For All MACs

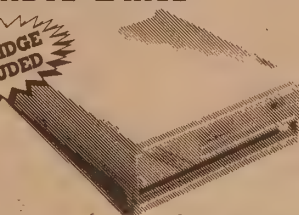
1MB, 4MB, 8MB,  
& 16MB Modules

\$15 Installation Charge  
While-U-Wait  
Excluding Powerbooks

## REMOVABLES

**BERNOULLI**

**150MB EXTERNAL SCSI CARTRIDGE DRIVE**



Cables

One 150MB Cartridge **\$559**



**SyQuest**

External Removable Drives

Removable Cartridge Drives



- 44MB w/ Cartridge .....\$389
- 88MB -C reads & writes to 44&88M ....\$489
- 105MB 3.5" .....\$629

**MACINTOSH**

**150MB EXTERNAL SCSI TAPE BACKUP**

INCLUDES CARTRIDGE, CABLES  
& RETROSPECT SOFTWARE FOR MAC

**\$219**

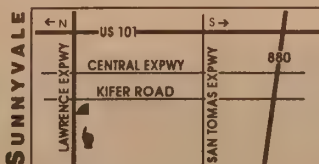
LIMITED SUPPLY

Your Hard Drive & Multimedia Super Source



**NCA**

**Computer Products**



1202 Kifer Rd. & Lawrence Expwy  
Mon-Fri 9am-8pm; Sat 10-7pm; Sun 11am-6pm  
(408) 739-9010 FAX (408) 739-2420



962 Blossom Hill Rd. & Winfield, Across Oakridge Mall  
Mon-Sat 10am-7pm; Sun 11am-6pm  
(408) 363-4600 FAX (408) 363-4610

**NCA**  
CORPORATE

Corporate, Dealer, Government,  
Educational, & International:

(408) 522-8672  
P.O. FAX(408) 739-2420

POS

VISA

MasterCard

DISCOVER

AMERICAN EXPRESS

Price subject to change without notice. Limited quantity on Special Items  
Not responsible for type errors. Expires Oct 22nd, 1993



# GRAND GO OPENING

How do you cut shipping costs and delays, saving customers time and money?  
*Move closer to your Customers!*

Liuski International, Inc. is proud to announce the opening of our newest facility. Located in Fremont, California, it will help to cut the costs and delays of shipping to customers throughout the Pacific Northwest region.

*Distribution Professionals Serving All Your Networking, Systems Integration & Multimedia Needs.*

**Liuski**  
INTERNATIONAL, INC.

47610 Kato Road  
Fremont, CA 94539  
(510) 651-9510

|                                   |                               |                               |                                |                                 |
|-----------------------------------|-------------------------------|-------------------------------|--------------------------------|---------------------------------|
| Los Angeles, CA<br>(818) 912-8313 | Atlanta, GA<br>(404) 447-9454 | Houston, TX<br>(713) 780-8069 | Melville, NY<br>(516) 454-8220 | Baltimore, MD<br>(410) 379-6400 |
| Chicago, IL<br>(708) 620-8928     | Miami, FL<br>(305) 593-2121   | Dallas, TX<br>(214) 484-5855  | Fremont, CA<br>(510) 651-9510  | D.C. Area<br>(202) 543-0428     |

**CANADIAN CUSTOMERS – Call our Toronto office Toll Free at (800) 665-5487**



Place your first Liuski order by October 31, 1993 and your purchases travel **FREE**.  
No freight charges will be applied to your first Liuski purchase order.

Liuski International, Inc. is privileged to distribute a distinguished line of office systems, components and peripherals. From sourcing to service, Liuski's distinction in meeting the networking and system integration needs of our customers has earned a place among DTH's Top Twenty Marketing Distributors in the U.S.A.

- Offering professional services such as:  
• Networking Support Group  
• DOS (510) 454-8252  
• Product Specification FAXBACK  
(510) 464-5320 ext. 575  
• Toll Free Technical Support  
(800) 347-5454  
• 10 North American Locations  
• Direct Deal Service  
• 48 Hour RMA Turn-around  
• 5:00PM Ship-out Time



Computer Reseller News  
VARBUSINESS  
Computer Retail Week

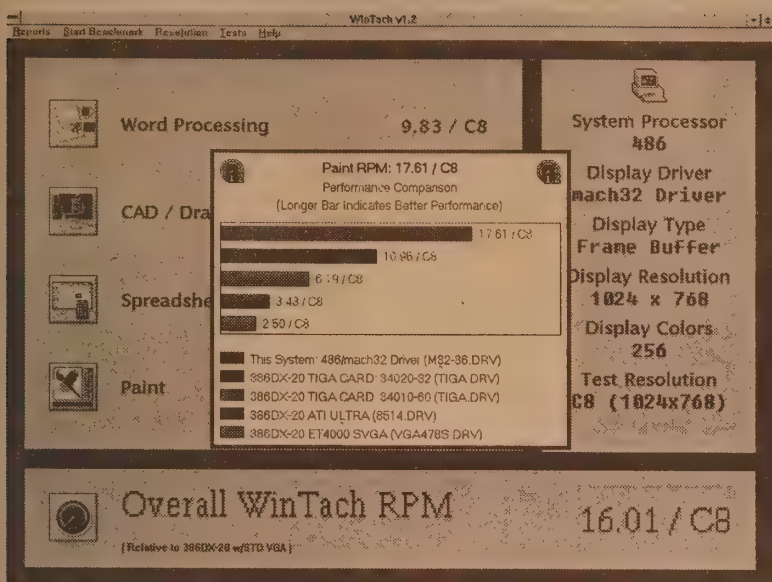


|                |             |               |         |         |            |           |        |            |
|----------------|-------------|---------------|---------|---------|------------|-----------|--------|------------|
| ADAPTEC        | AZTECH LABS | COLORADO      | DIAMOND | HYUNDAI | LOGITECH   | NOVELL    | SMC    | 3M         |
| ALLIED TELESIS | BAFO        | CONNER        | D-LINK  | IIT     | MAG        | PANASONIC | STAR   | TOSHIBA    |
| APC            | BOCA        | CREATIVE LABS | DTC     | LABTEC  | MAGITRONIC | PRACTICAL | SUMMIT | TRIPP LITE |
| ARTISOFT       | CARDINAL    | CURTIS        | FUJI    | LEXMARK | MICRODYNE  | SAMSUNG   | SYDOS  | TEXEL      |
| ATI            | CNET        | CYRIX         | GATEWAY | LINK    | NEC        | SEAGATE   | TECMAR | Z-RAM      |



# Multimedia & beyond

Continued from page 316



we're studying) many Windows cards still shine here. WinTach's method is to compare a card's performance to a basic VGA setup on a 386-20, add together the scores of all four applications, and take the average. The standard VGA-based 386-20 attains a score of 2.57. Again, expect higher scores with our test system.

## Hercules Computer Technology's Speedy 1.1

Another fun benchmark, Speedy is lesser known than the two above. It's a multitasking program, which opens up to nine different windows on the screen, each simultaneously performing a specific graphics task. Adding the scores of all the respective graphics tasks (including polygon filling and painting, text drawing and scrolling, and bitmap painting) yields a base number for a specific score, termed a Speedmark. Speedy, to quote Hercules' documentation, "places significant stress on the display driver when it is required to juggle multiple device contexts. The degree to which the CPU can offload graphics tasks and go about other chores, such as calculating pixels-per-second, is part of the performance advantage of a Windows graphics accelerator."

Out of necessity, only brief descriptions of each of the benchmark programs can be offered here. Readers are encouraged to seek these programs out for their own use. While best efforts have been made to work with manufacturers who are honest in their product development, it's still best to warn the user that WinBench scores (and benchmark scores in general) shouldn't be the only criterion to be applied in your buying decision. We'll have more to say about this later.

## TEST SYSTEM

The test computer used for card evaluation was a 486-33DX with two VESA Local-Bus

used; Adobe Type Manager and TrueType were disabled. Refresh rates and color depths affect test scores so I stayed with one standard configuration for every card.

The original ATI VGA Wonder card was used as a base for comparing video card performance. It's a well-regarded, industry-standard card that was first released almost four years ago.

## WHAT ARE WE LOOKING AT?

This article looks at two ISA and two VL-Bus cards. On the high end, is Number Nine Corporation's #9GXE, an ISA card based on S3's powerful 86C928 chip (see sidebar for more details). The other ISA card, NDI Volante's Warp 10, is based on the S3 86C801 video chip.

The VL-Bus cards are Orchid's Fahrenheit VA-VLB, and STB's PowerGraph VL-24. Be aware that both of these VL-Bus cards have ISA counterparts.

## NUMBER NINE'S #9GXE

The #9GXE is a 16-bit ISA card, and easily the most expensive accelerator in our review. It bears S3's latest and greatest GUI chip, the 86C928, which is rapidly becoming a very popular high-end option for card makers (again, see sidebar for more details). The review unit came with 2MB of 70ns VRAM, and is factory-upgradable to 3MB. The #9GXE is capable of supporting up to 65,536 colors at 1024 x 768 resolution. In some benchmark tests, the GXE blew the doors off every other card we've tested (with a blazing 9.53 Speedy and 24.1 WinMark), and even outperformed some local-bus cards.

The card is physically well made, with no DIP switches or jumpers to set for refresh rate adjustment; one of the GXE's software utilities allow you to adjust your

slots, 8MB of RAM with 256K external cache, and a Seiko CM1440 monitor. All video tests were done at 1024 x 768 resolution, with 256 colors, at a refresh rate of 43Hz interlaced. The memory manager QEMM-386 v.6.03 was also

screen refresh rates without messing with the hardware! (Be sure your monitor supports high refresh rates, though, or you can damage your screen.) Another utility is a virtual screen feature that allows a 2048 x 768 working area, that you pan around in with the mouse. Application programs can be opened and then scrolled off the screen, revealing more display space for programs. The GXE's Windows software utilities are some of the best I've seen. Most of the card's documentation is devoted to them. The card's installation docs are extremely short, reflecting its simple install procedure. One minor complaint for the GXE is that it lacks a VGA feature connector, which is needed if you're hooking up TV display cards or other video devices. Also note that this card will not work with interlaced monitors. The #9GXE is also not compatible with the Windows Super VGA driver.

In all fairness, none of the other ISA cards tested can be directly compared to the GXE, they are all based on a lower-end S3 chip. Speed levels will naturally be somewhat lower. Also, among the card's software utilities is a controversial Turbo Copy feature, which caches text strings and color fills on-chip. Following Number Nine's suggestion, I performed the tests first with the Turbo Copy feature enabled and then disabled, and experienced substantial differences in benchmark numbers—scores averaging 40% lower when this feature was disabled.

In the end, the #9GXE is a quality package, though perhaps a bit pricey for the average user, with a superb set of software utilities and, the finest overall performance I've found in an ISA card.

## NATIONAL DESIGN INC.'S VOLANTE WARP 10

The NDI Volante Warp 10 is a solid, competitive performer among the crowd of inexpensive 86C801-based Windows accelerators. Known primarily for their high-end CAD cards, NDI's first entry into the Windows accelerator market is a simple 16-bit ISA card in a clean package. Offering the standard 1MB of 60ns DRAM, the Warp 10's benchmark numbers are squarely in the middle of the pack (with an 8.75 WinMark and a respectable 5.75 Speedy). It's hard to distinguish the Warp 10 card from other cards—its performance is functionally identical to other '801-based cards. It offers the standard 640 x 480 true

Continued on page 232



## 486DX2-66/DX-33

### ISA

- INTEL 486 CPU
- AMI BIOS
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- IDE 2H/2F
- 2S/1P/1G PORTS
- SVGA CARD W/1MB
- 14" SVGA MONITOR .28
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1340/1166**

## 486DX2-50/DX-50

### ISA

- INTEL 486 CPU
- AMI BIOS
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- IDE 2H/2F
- 2S/1P/1G PORTS
- SVGA CARD W/1MB
- 14" SVGA MONITOR .28
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1234/1275**

## 486DX-40

### ISA

- AMD 486 CPU
- AMI BIOS
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- IDE 2H/2F
- 2S/1P/1G PORTS
- SVGA CARD W/1MB
- 14" SVGA MONITOR .28
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1295**

## 486-33 DLC

### ISA

- CYRIX 486 CPU
- AMI BIOS
- 4 MB RAM
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- IDE 2H/2F
- 2S/1P/1G PORTS
- SVGA CARD W/1MB
- 14" SVGA MONITOR .28
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1098**

## 386-40

### ISA

- AMD 386 CPU
- AMI BIOS
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 120 IDE HARD DRIVE
- IDE 2H/2F
- 2S/1P/1G PORTS
- SVGA CARD W/1MB
- 14" SVGA MONITOR .28
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$928**

## 486DX2-66/DX-33

### LOCAL BUS

- INTEL 486 CPU
- 256K CACHE
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- 32 BIT VLB w/1 MB VIDEO CARD
- 2H/2F CONTROLLER
- 2S/1P/1G PORTS
- 14" SVGA MONITOR .28 NI
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1563/1358**

## 486DX2-50/DX-50

### LOCAL BUS

- INTEL 486 CPU
- 256K CACHE
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- 32 BIT VLB w/1 MB VIDEO CARD
- 2H/2F CONTROLLER
- 2S/1P/1G PORTS
- 14" SVGA MONITOR .28 NI
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1457/1498**

## 486DX-40

### LOCAL BUS

- AMD 486 CPU
- 256K CACHE
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- 32 BIT VLB w/1 MB VIDEO CARD
- 2H/2F CONTROLLER
- 2S/1P/1G PORTS
- 14" SVGA MONITOR .28 NI
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1430**

## 486-33 DLC

### LOCAL BUS

- CYRIX 486 CPU
- 256K CACHE
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- 32 BIT VLB w/1 MB VIDEO CARD
- 2H/2F CONTROLLER
- 2S/1P/1G PORTS
- 14" SVGA MONITOR .28 NI
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE

**\$1195**

## 486-33DX

### MULTIMEDIA

- INTEL 486 CPU
- 256K CACHE
- 4 MB RAM UP TO 32 MB
- 1.2 TEAC & 1.44 TEAC FD
- 212 W.D. IDE 12ms HD
- 32 BIT VLB w/1 MB VIDEO CARD
- 2H/2F CONTROLLER
- 2S/1P/1G PORTS
- 14" SVGA MONITOR .28 NI
- 101 ENHANCED KEYBOARD
- MINI-TOWER/220 W PS
- HI-RES MOUSE
- TOSHIBA XM-3401 CD ROM
- PRO-AUDIO 16 SOUND CARD

**\$1926**

## 486DX2-66/DX-33

### MICRONICS

- 256K CACHE
- 8 MB-70 EXP TO 64 MB
- PHOENIX BIOS
- 2 VESA, 6 ISA
- 32 BIT ORCHID VLB CONTROLLER
- 1.2 & 1.44 MB TEAC FD
- MED TOWER 230 PS
- MAXI OR MITSUMI KEYBOARD
- ATI-ULTRA PRO 2 MB VRAM VIDEO CARD MACH 32

**\$1845/1655**

## 486DX2-66/DX-33

### AMI

- 256K CACHE
- 8 MB-70 EXP TO 64 MB
- AMI BIOS
- 2 VESA, 6 ISA
- 32 BIT ORCHID VLB CONTROLLER
- 1.2 & 1.44 MB TEAC FD
- MED TOWER 230 PS
- MAXI OR MITSUMI KEYBOARD
- LEVEL II 2 MB VRAM S3 928 GUI ACCELERATOR

**\$1910/1720**

## 486DX2-66/DX-33

### DIAMOND

- 256K CACHE
- 8 MB-70 EXP TO 64 MB
- DIAMOND BIOS
- 2 VESA, 6 ISA
- 32 BIT ORCHID VLB CONTROLLER
- 1.2 & 1.44 MB TEAC FD
- MED TOWER 230 PS
- MAXI OR MITSUMI KEYBOARD
- DIAMOND VIPER 2 MB VRAM WEITEK P9000

**\$1710/1510**

## 486DX2-66/DX-33

### ORCHID

- 256K CACHE
- 8 MB EXP TO 64 MB
- AMI BIOS
- 2 VESA, 6 ISA
- 32 BIT ORCHID VLB CONTROLLER
- 1.2 & 1.44 MB TEAC FD
- MED TOWER 230 PS
- MAXI OR MITSUMI KEYBOARD
- ORCHID CELSIUS 9000 3 MB VRAM WEITEK P9000

**\$1535/1345**

## 486DX2-66/DX-33

### MICROCENTER

- 256K CACHE
- 8 MB EXP TO 64 MB
- PHOENIX BIOS
- 2 VESA, 6 ISA
- 32 BIT ORCHID VLB CONTROLLER
- 1.2 & 1.44 MB TEAC FD
- MED TOWER 230 PS
- MAXI OR MITSUMI KEYBOARD
- DIAMOND VIPER 2 MB VRAM WEITEK P9000

**\$1540/1350**



# COMPUTER NEEDS AT THE PRICES YOU WANT!!!

## MOTHERBOARDS

|                                        |       |
|----------------------------------------|-------|
| <b>AMI</b>                             |       |
| Super Voyager 486-33 256K VLB          | \$845 |
| Super Voyager 486-50 256K VLB          | 965   |
| Super Voyager 486 DX2-66 VLB           | 1150  |
| Enterprise II 486-50 EISA 128K         | 1095  |
| Enterprise III 486-33 256K VLB EISA    | 970   |
| Enterprise III 486-50 256K VLB EISA    | 1165  |
| Enterprise III 486DX2-66 256K VLB EISA | 1295  |

|                                |        |
|--------------------------------|--------|
| <b>MICRONICS</b>               |        |
| 486-50 256K Cache EISA E2      | \$1150 |
| 486-33 Local Bus 256K Cache    | 650    |
| 486DX2-50 Local Bus 256K Cache | 765    |
| 486DX2-66 Local Bus 256K Cache | 875    |
| 486-33 256K EISA VLB           | 995    |
| 486DX2-50 256K EISA VLB        | 1150   |
| 486DX2-66 256K EISA VLB        | 1295   |

|                                       |               |
|---------------------------------------|---------------|
| <b>ORCHID (w/o CPU)</b>               |               |
| Superboard 486 (VLB VGA & Controller) |               |
| DX33/DX50/DX2-66 256K                 | \$225/230/225 |

## DRIVES

|                                               |          |
|-----------------------------------------------|----------|
| Conner CP30204 212 MB 12ms IDE                | \$198    |
| Conner CP30254 250 MB 14ms IDE                | 225      |
| Conner CP30544 540 MB 12ms IDE                | 575      |
| Fujitsu M2624T 520 MB 12ms IDE                | 698      |
| Maxtor 7245AT 245 MB 15ms IDE                 | 220      |
| Maxtor 7345A 340 MB 13ms IDE                  | 295      |
| Quantum LPS240 240 MB 15ms IDE                | 240      |
| Quantum LPS525A 525 MB 13ms IDE               | 565      |
| Western Digital WD2200 212 MB 14ms IDE        | 198      |
| Western Digital WD2250 250 MB 14ms IDE        | 225      |
| Western Digital WD2340 340 MB 13ms IDE        | 285      |
| Fujitsu M2623SA 425 MB 11ms SCSI              | 635      |
| Fujitsu M2624F 520 MB 11ms SCSI               | 726      |
| Fujitsu M2694SA 1.2 GB 10ms SCSI              | 1065     |
| Fujitsu M2652SA 2.0 GB 11ms SCSI              | 1867     |
| Fujitsu M2654SA 2.4 GB 12ms SCSI              | 2410     |
| Quantum LPS525S 525 MB 13ms SCSI              | 737      |
| Toshiba 877 MB 12ms 512K Cache SCSI-2         | 850      |
| Toshiba 1.2 GB 12ms 512K Cache SCSI-2         | 985      |
| LXT 7213S 200 MB 15ms SCSI 3.5"               | 265      |
| 540SL 540 MB 8.5ms SCSI-2 1" HT               | 852      |
| MXT 1240S 1.2 GB 8.5ms SCSI-2 3.5"            | 1150     |
| PO-12 1.2 GB 13ms SCSI                        | 975      |
| Optical Drives: Rewritable 1 GB 35ms SCSI Ext |          |
| Tahiti II/1 GB Cartridge Glass                | 1750/145 |

## CONTROLLER CARDS

|                                 |       |
|---------------------------------|-------|
| <b>ULTRASTOR</b>                |       |
| ULT 15C IDE 8MB 256K Cache      | \$193 |
| ULT 14F ISA SCSI 32K Cache      | 213   |
| ULT 24F SCSI EISA 64K Cache     | 372   |
| ULT 34F VL BUS SCSI-2 32K Cache | 283   |

|                                        |       |
|----------------------------------------|-------|
| <b>ADAPTEC</b>                         |       |
| 1542C SCSI w. Kit (10MB)               | \$245 |
| 1542C Plus w. ASW 500                  | 313   |
| 1640 SCSI w. Kit for MCA               | 332   |
| 1742A SCSI EISA w. Kit (2F/2H)         | 421   |
| ASW-1410 ASPI MS-DOS Manager 3.0       | 69    |
| ASW-EZ SCSI for DOS & WIN              | 67    |
| ASW-310 Sy-Tos Plus (Tape Back-Up S/W) | 95    |

|                                       |       |
|---------------------------------------|-------|
| <b>AMI</b>                            |       |
| FastDisk Cache SCSI EISA (up to 16MB) | \$485 |
| FastLan Ethernet-SCSI VLB             | 462   |

|                               |       |
|-------------------------------|-------|
| <b>DTC</b>                    |       |
| 2290 IDE EISA                 | \$135 |
| 3280AS SCSI                   | 103   |
| 3290AS EISA SCSI Host Adapter | 475   |
| 6282 1:1 ESDI                 | 122   |

|                               |       |
|-------------------------------|-------|
| <b>MYLEX</b>                  |       |
| DE 376 EISA SCSI w/4 MB Cache | \$722 |

## VGA CARDS

|                                    |       |
|------------------------------------|-------|
| <b>ATI</b>                         |       |
| Graphics Ultra Pro 2 MB (VRAM) ISA | \$345 |
| Graphics Ultra Pro 2 MB w/Mouse    | 399   |
| Graphics Ultra Pro 2 MB VRAM VLB   | 352   |
| Graphics Ultra Pro 2 MB EISA       | 462   |

|                                         |         |
|-----------------------------------------|---------|
| <b>DIAMOND</b>                          |         |
| Stealth 1 MB (VRAM) w/Sierra Hi-Color   | \$197   |
| Stealth 24 1 MB (DRAM) 16 Million Color | 176     |
| Stealth 24 1 MB (DRAM) VLB              | 186     |
| Stealth Pro (VRAM) 1 MB/VLB             | 255/265 |
| Stealth Pro (VRAM) 2 MB/VLB             | 355/365 |
| Viper VLB P9000 (VRAM) 2 MB             | 355     |

|                                              |       |
|----------------------------------------------|-------|
| <b>ORCHID</b>                                |       |
| Fahrenheit VA/VLB w. Voice Annotation 24 Bit | \$199 |
| Fahrenheit VLB VESA 1 MB 24 Bit              | 165   |

|                                   |     |
|-----------------------------------|-----|
| Fahrenheit 1280 (DRAM) 1 MB       | 159 |
| Celcius VLB 1 MB                  | 235 |
| Fahrenheit P9000 VLB 3 MB         | 355 |
| ProDesigner IIS 1 MB, w. Hi-Color | 145 |

|                                    |       |
|------------------------------------|-------|
| <b>MYLEX</b>                       |       |
| GLE911 1 MB 1280x1024 EISA         | \$398 |
| GXE020B 4 MB (DRAM) 1280x1024 2 MB |       |
| VRAM TMS34020 Tiga/EISA            | 1035  |

|                                            |       |
|--------------------------------------------|-------|
| <b>NUMBER NINE</b>                         |       |
| #9 GXe 1280x1024 90Hz 53-928 Chip          |       |
| -Level 10VRAM ISA 1 MB                     | \$285 |
| -Level 11 VRAM ISA 2 MB                    | 385   |
| -Level 11 VRAM VLB 2 MB                    | 395   |
| -Level 12 VRAM ISA 3 MB                    | 492   |
| GXI Lite L20 TIA, WIN 1280-16 Color        | 565   |
| GXI Lite L21 CAD WIN 1280-16 Color         | 725   |
| GXI Level 24 CAD WIN 1280x1024 256         | 1279  |
| GXI TC-Level 29 24 Bit 1280x1024 256 Color |       |
| at 72 Hz 4 MB (VRAM) 1 MB DRAM             | 1495  |
| ET4000 Tseng Lab 1 MB                      | 95    |
| ET4000 Tseng Lab VLB 1 MB                  | 129   |
| Oak 067 Super VGA 512K                     | 52    |
| Oak 077 Super VGA 1 MB                     | 65    |
| STB Super VGA 1 MB                         | 99    |

|                                 |       |
|---------------------------------|-------|
| <b>AMI</b>                      |       |
| FastView EISA VGA Graphics 1 MB | \$269 |
| FastView P9000 VLB 2 MB         | 395   |

|                          |          |
|--------------------------|----------|
| <b>OTHERS</b>            |          |
| Artist XJS 12-16         | \$2190   |
| Artist XJS Lite          | 1485     |
| Artist Winsprint 100+    | 442      |
| Artist Winsprint 150+    | 543      |
| Hercules GS Gold 16      | 393      |
| Hercules Graphite        | 342      |
| Methues 1104+16/256      | 992/1085 |
| Methues Premiere 1MB/2MB | 372/565  |
| Matrox 1024              | \$CALL   |
| Matrox Impression AT     | \$CALL   |
| TrueVision 1024/32       | 1585     |
| TrueVision 1024P/24      | 1285     |
| Rasterex Tracer 1280     | 2685     |
| Spea 1280                | 1685     |

## MONITORS

|                                        |       |
|----------------------------------------|-------|
| <b>MAG (AutoSwitch Power Supply)</b>   |       |
| PM 1558 14" 1024x768 .28NI             | \$365 |
| MX145 14" 1280x1024 .26 Sony Trinitron | 525   |
| MS15F 15" Flat 1280x1024 .28 NI Mac II | 575   |
| MS17F 17" Flat 1280x1024 .26 NI Mac II | 1055  |
| Mac Adapter                            | 25    |

|                                           |        |
|-------------------------------------------|--------|
| <b>MITSUBISHI</b>                         |        |
| HL6955SETK 20" 1280x1024 .31 NI           | \$1745 |
| Diamond Pro 17" 1280x1024 .26NI Trinitron |        |
| MAC II 100-240v                           | 1075   |
| BNC Cable                                 | 39     |

|                                         |       |
|-----------------------------------------|-------|
| <b>NANAO (100-240v)</b>                 |       |
| F340W 15" Full Flat Screen 1024x768 .28 | \$719 |
| T5601 17" 1280x1024 .25 NI Mac II       | 1695  |
| F5501 17" 1280x1024 .28 NI Mac          | 1075  |
| F551W 17" 1280x1024 .28 NI Mac          | 1125  |
| T6601 20" 1280x1024 .31 NI Trin Mac II  | 2595  |
| F7501 21" 1280x1024 .31 NI Mac II       | 2095  |
| Mac II Cable Adapter                    | 69    |

|                                             |            |
|---------------------------------------------|------------|
| <b>NEC (120v)</b>                           |            |
| 4FGe 15" Flat 1024x768 .28 NI Mac           | \$709      |
| 5FGe 17" 1024x768 .28 NI (no Accu color)    | 1099       |
| 6FG 21" Flat 1280x1024 .28 Mac              | 2395       |
| NEC Monitor Lens (Anti-Reflection & Static) |            |
| for 4FG/5FG/6FG                             | 74/115/185 |
| FG/MacII Cable Adapter Kit                  | 19.50      |

## MONITORS

|                                  |       |
|----------------------------------|-------|
| <b>VIEWSONIC</b>                 |       |
| 4E 14" 1024x768 .28 Int 110/220V | \$305 |
| 5+ 14" 1024x768 .25 NI Mac II    | 495   |
| 5e 14" 1024x768 .28 NI Mac II    | 395   |
| 6e 14" 1024x768 .28 NI           | 335   |
| 6FS 15" 1024x768 .28 NI 90/264v  | 535   |
| 15 15" 1280x1024 .28 NI Mac II   | 579   |
| 7 17" 1280x1024 .28 NI Mac II    | 975   |
| 17 17" 1280x1024 .28 NI Mac II   | 1125  |
| 8 20" 1280x1024 .31 NI Mac II    | 1595  |
| 20 20" 1600x1280 .28 NI MacII    | 1895  |

|                                    |       |
|------------------------------------|-------|
| <b>SONY</b>                        |       |
| 1430S 14" 1024x768 NI 120v         | \$599 |
| 1604S 17" 1024x768 .25 NI 100-240v | 965   |
| 1730 17" 1024x768 .25NI            | 995   |
| 3028 20" 1280x1024 .30 NI          | 2295  |

## PRINTERS

|                                      |               |
|--------------------------------------|---------------|
| <b>PANASONIC</b>                     |               |
| 1123/1124/1624                       | \$195/259/349 |
| -Auto Sheet Feeder for 1124 KX-P36   | 120           |
| 2023 24 pin quiet printer            | 199           |
| 2123 24 pin 43.5dBA color capability | 239           |
| 2124 24 pin 43.5dBA color capability | 319           |
| 2624 24 pin quiet printer 46.5dBA    | 375           |
| 2180 9 pin 45 dBA color capability   | 159           |

|                       |       |
|-----------------------|-------|
| <b>CANON</b>          |       |
| BJ-200 (after rebate) | \$349 |
| BJ-300 desktop        | 349   |

|                             |                    |
|-----------------------------|--------------------|
| <b>HP (HEWLETT PACKARD)</b> |                    |
| <b>LaserJet w/Toner</b>     |                    |
| Desk Jet 500/500C/550C      | \$369/489/699      |
| LaserJet IIP                | 839                |
| LaserJet 4/4M/4L/4SI        | 1359/1865/685/3295 |

## TAPE BACK-UP

|                                         |           |
|-----------------------------------------|-----------|
| <b>(&lt;500 MB TAPE BACK-UP)</b>        |           |
| Colorado 120/250 MB                     | \$145/197 |
| Colorado KE-10 Ext kit w/card           | 105       |
| Colorado Ext Port card                  | 37        |
| FC-10 High Perf Card                    | 85        |
| Colorado Trakker 120/250 MB             | 344/404   |
| Summit Express 305 MB 10MB/sec          | 264       |
| Archive Viper 250 MB hh SCSI I/E        | 349/CALL  |
| Archive Viper 250 MB w/QIC 15MB/min 1"H | 179       |
| w/Central Point SW add                  | 20        |
| Viper 525 MB hh SCSI Int/Ext 6MB/sec    | 549/950   |

|                                                    |           |
|----------------------------------------------------|-----------|
| <b>(&gt;500 MB for PC/SERVER)</b>                  |           |
| Colorado 700 MB                                    | \$689     |
| FC-15 high perf card                               | 181       |
| Colorado 2.4/4.0 GB Qic 5.25                       | 969/1499  |
| YE Data1 .2GB SCSI DAT                             | 529       |
| Python 4(8)GB 3.5" DAT SCSI .5m I/E                | 1195/1587 |
| HP 2GB DAT 4mm Int/Ext                             | 1095/1245 |
| HP 5GB DAT 4mm Int/Ext                             | 1320/1475 |
| Maynard 2GB 4mm DAT Int/Ext                        | 1890/2060 |
| Mount FS1200 4mm DAT HH Int/Ext                    | 1840/2133 |
| Exabyte 2GB 8mm DAT HH Int/Ext                     | 1485/1815 |
| Exabyte 8250 5GB HH 2hrs Int/Ext                   | 1795/1875 |
| Exabyte 8505 10GB HH 2yrs Int/Ext                  | 2475/2770 |
| (above drives require special cont & soft drivers) |           |

## TAPE BACK-UP DRIVERS

|                           |      |
|---------------------------|------|
| <b>NOVASTAR</b>           |      |
| Novaback for DOS          | \$89 |
| Novaback for OS/2         | 89   |
| Novanet Multiuser NLM     | 439  |
| Sytos for DOS/Novell, Gen | 185  |
| ARCserve Solo             | 185  |

## MULTIMEDIA

|                                        |           |
|----------------------------------------|-----------|
| NEC CD-ROM 84/74 (280ms)               | \$420/570 |
| Mitsumi CD-ROM (350ms) w/Card          | 185       |
| Panasonic CR-522 (380ms)               | 205       |
| Toshiba XM-3401 Int/Ext                | 420/520   |
| Creative Labs Sound Blaster Pro Deluxe | 120       |
| Creative Labs Sound Blaster 16 ASP     | 198       |

## MODEMS

|                                         |         |
|-----------------------------------------|---------|
| <b>US ROBOTICS</b>                      |         |
| Courier 144 v.32bis v.42 MNP5 Int       | \$372   |
| Courier 144 v.32bis v.42 MNP5 Ext       | 375     |
| Courier 144 w/Fax Ext                   | 395     |
| Courier HST-DS 144 v.32bis v.42 MNP EXT | 725     |
| Sportster 96 Modem MNP5 Int/Ext         | 149/159 |
| Sportster 96/96 Fax Int/Ext             | 159/159 |
| Sportster 14.4/14.4 Fax MNP5 Int/Ext    | 175/195 |
| Sportster 14.4/14.4 Fax for Mac Ext     | 225     |
| Shared Access Modem Sharing Kit         | 672     |

## PLOTTERS/DIGITIZERS

|                             |       |
|-----------------------------|-------|
| <b>HOUSTON INSTRUMENTS</b>  |       |
| Im Maker 1117 A/B Pen HPGL  | \$632 |
| DMP-161 A-D 8 Pen HP-GL/2   | 2625  |
| DMP-162 A-E 8 Pen HP-GL/2   | 3495  |
| DMP-162R A-E 8 Pen Roll Med | 3975  |
| V50 (Inkjet A-C Size) New   | 1405  |

## CALL FOR OTHER PRODUCTS NOT LISTED

|                                |       |
|--------------------------------|-------|
| <b>DIGITIZERS</b>              |       |
| <b>SUMMAGRAPHS</b>             |       |
| III 12x12 w/16btn 4bt & Pen    | \$305 |
| III 12x18 w/16btn or 4bt & Pen | 545   |

## KURTA

|                                                |       |
|------------------------------------------------|-------|
| XLP 12x12 w/4btn & Pen                         | \$245 |
| XLP 12x18 w/16btn or 4btn Pen                  | 520   |
| IS/ONE 12x12 4btn/12btn/Pen                    | 329   |
| IS/ONE 12x17 4btn/12btn/Pen                    | 530   |
| (IS/ONE also available w/Cordless 4btn or pen) |       |
| XLC 24x36                                      | 1260  |
| XLC 18x24                                      | 1070  |

## CALCOMP

|                |       |
|----------------|-------|
| 12x12          | \$279 |
| 12x18          | 629   |
| 18x24          | 1275  |
| 6x9 P Series   | 439   |
| 12x12 P Series | 485   |

## SCANNERS

|                                  |       |
|----------------------------------|-------|
| <b>MICROTEK</b>                  |       |
| Scanmaker II 1200dpi Max         | \$850 |
| Scanmaker IIxE 1200dpi Max       | 1130  |
| Scanmaker 1850 1850dpi Max       | 1360  |
| MS-II OCR Scanner                | 669   |
| ADF-600 Auto Sheet Feeder        | 480   |
| Scanmaker 45T for transparencies | NEW   |

## NETWORKING

|                               |                    |
|-------------------------------|--------------------|
| Netware Lite 1.1 + DR DOS 6   | \$65               |
| Netware Lite w. Win Utilities | 75                 |
| Netware 2.2                   |                    |
| -5/10/50/100 User             | 489/1089/1995/2945 |
| Netware 3.11                  |                    |
| -5/10/20 User                 | 599/1345/1885      |
| -50/100/250 User              | 2650/3859/6885     |
| Netware 4.0                   |                    |
| -5/10/25 User                 | 935/2095/2895      |
| -50/100/250 User              | 3915/5495/9675     |

## SMC (Western Digital)

|                                           |         |
|-------------------------------------------|---------|
| Ethernet Plus Elite 8 Bit Coax            | \$115   |
| Ethernet Plus Elite 16 Coax/16 TP         | 139/145 |
| Ethernet Plus Elite 6 pack 16 Coax/16 Tp  | 725/750 |
| 3016 16 Bit Coax/16 Bit TP                | 145/149 |
| Ethernet Elite 16 combo/6 pk              | 175/840 |
| Ethernet Plus/A for MCA/TP                | 215/219 |
| Ethernet Elite 32 bit Coax/TP             | 650/660 |
| Netware Boot ROM for Ethernet             | 34      |
| 8 Port Concentrator (8TP+1AUI)            | 339     |
| 12 Port Concentrator (12TP+2AUI+1BNC)     | 595     |
| Token Ring 16/4 ISA/MCA                   | 379     |
| WD-8003 EP Ethernet Plus Elite 8 Bit Coax | 49      |
| WD Lan EP8 Bit (cable included)           | 39      |
| WD Lan-10T/A for MCA (cable included)     | 65      |

## POWER SUPPLIES

### AMERICAN POWER CONVERSION (UPS)

|                                          |       |
|------------------------------------------|-------|
| APC-400 Smart UPS (286,386 WS)           | \$309 |
| APC-600 Smart UPS (386,486 FS)           | 399   |
| APC-900 Smart UPS (486,486 FS & WS)      | 639   |
| APC-1250 Smart UPS (multiple FS & WS)    | 799   |
| APC-450 Back UPS 286 PS/2 386            | 235   |
| APC-600 Back UPS 286 386 FS              | 285   |
| APC-800 Back UPS 800RT 2-4ms 15min       | 565   |
| APC-750 On-Line UPS (286,286,486 FS)     | 1365  |
| APC-1500 On-Line UPS (multiple servers)  | 2499  |
| APC PowerChute Plus for Novell           | 79    |
| APC UPS Monitoring Board for Netware     | 69    |
| Power Doctor (DOS) I/F kit for Smart-UPS | 79    |

### PC POWER COOLING

|                                                  |      |
|--------------------------------------------------|------|
| Standard 220 for desktop/full tower              | \$85 |
| Silencer                                         | 270  |
| -for slim, baby or mid tower                     | 143  |
| -for AT desktop/full tower                       | 163  |
| Turbo-Cool                                       | 300  |
| -for slim                                        | 145  |
| -for desktop/full tower                          | 120  |
| Turbo-Cool 450 for desktop/full tower            | 312  |
| InnerSource 2210 UPS for full tower, Int 95-132v |      |
| 220W DC, 100W AC=550VA Ext UPS                   | 299  |
| Novell Network Interface                         |      |
| -for InnerSource 2210 UPS                        | 55   |

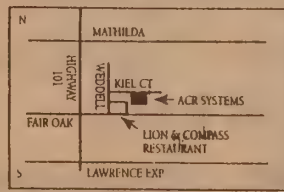
### TRIPP LITE

|                              |       |
|------------------------------|-------|
| BC 500 LAN (UPS 350W)        | \$215 |
| BC 900 LAN (UPS 650W)        | 363   |
| Omni 450 LAN                 |       |
| (UPS 325W + Line Regulation) | 295   |
| Omni 600 LAN                 |       |
| (UPS 425W + Line Regulation) | 385   |

**ACR SYSTEMS**  
1038 Kiel Ct.  
Sunnyvale, CA 94089

(408) 734-9795  
Fax: (408) 734-9798

Mon-Fri 9am-6pm Saturday 10am-5pm  
Prices subject to change without notice







**STOP** Searching Around...Why Look Around When You Can Spend Less Money And Get A Faster Performance Machine From HITRON?

Sound Like A Dream? HITRON Will Make It Happen For You! When We Say We Can Save You Money...We Mean It! Don't Believe It? Just Pick Up The Phone And Give Us A Call. We Will Match Or Beat Any Of The Advertised Prices!!!



**A SUPER BUY FOR  
SUPER QUALITY!  
HIGH PERFORMANCE  
VESA LOCAL BUS  
SYSTEMS USING**

**AMI** OR **MICRONICS** OR **NICE**  
**MOTHERBOARDS**

| SYSTEM      |               |               |
|-------------|---------------|---------------|
| Motherboard | 486DX2-66     | 486DX-33      |
| AMI         | <b>\$1795</b> | <b>\$1595</b> |
| MICRONICS   | <b>\$1735</b> | <b>\$1525</b> |
| NICE        | <b>\$1605</b> | <b>\$1375</b> |

FOR EISA VLB PLEASE CALL!!!

**INCLUDES:**

- AMI, Micronics or Nice Motherboard
- 256K Cache
- 4 MB RAM
- 120 MB IDE Hard Drive
- 32 Bit IDE Controller Card
- 1.2 MB and 1.44 MB Floppy Drives
- 2 Serial/1 Parallel Ports
- 14" SVGA .28dp Monitor
- 32 Bit SVGA 1MB Display Card
- Mid-Tower Case w/230Watt PS
- 101 Enhanced Keyboard
- FOR OTHER OPTIONS...CALL



**ANNOUNCING...PEER-TO-PEER  
ARTISOFT LANTastic NETWORK  
FOR LESS!!**

- LANtastic AI Software
- 16-Bit Ethernet Card
- Terminator
- 10 Feet Coax Cable

LAN TIMES  
READERS  
CHOICE  
1992

PC  
MAGAZINE  
EDITORS'  
CHOICE  
April 11, 1992  
LANtastic Version 4.11

LAN  
MAGAZINE  
1992 PRODUCT  
OF THE YEAR

**AS LOW AS  
\$159  
PER NODE**

Novell  
Certified  
NetWare  
Engineer

**NETWORK SERVICES FROM HITRON COMPUTERS**

- ❖ FREE CONSULTATION!
- ❖ DESIGN & INSTALLATION
- ❖ HARDWARE AND SOFTWARE CONFIGURATION
- ❖ SUPPORT AND SERVICE
- ❖ FLAT RATE

**90 DAYS SAME  
AS CASH!**

PERSONAL FINANCING  
AVAILABLE

- \*90 DAYS SAME AS CASH (w/o.c.)
- \*LOW MONTHLY PAYMENTS
- \*EASY TO APPLY
- \*FAST CREDIT DECISION
- \*CALL FOR DETAILS

- \*1 YEAR PARTS WARRANTY
- \*LIFETIME LABOR & TECH SUPPORT
- \*NATIONWIDE ON-SITE SERVICE AVAILABLE
- \*CORPORATE PO'S WELCOME
- \*CORPORATE LEASING AVAILABLE



# HITRON HAS THE RIGHT SYSTEM AT THE RIGHT PRICE!

**CLEARANCE  
SALE  
EVERY  
SATURDAY  
DON'T  
MISS IT!**

## HITRON MULTIMEDIA PACKAGE

- Philips CD-ROM (Photo CD Compatible)
  - Sound Card
  - 2 Stereo Speakers
  - 9 CD Titles
  - Microsoft Bookshelf/Media Sound Library/Mother Goose/Sierra King Quest
- Also Amplifier.....+\$60 **\$349**

**MORE THAN 100 CD  
TITLES AVAILABLE!  
FOR INFORMATION PLEASE CALL**

## HITRON FILE SERVER

**486DX2-66 MHz  
EISA VESA LOCAL BUS  
\$1995**

**486DX-50 MHz  
EISA VESA LOCAL BUS  
\$1925**

**486DX-33 MHz  
EISA VESA LOCAL BUS  
\$1785**

- 256K Cache Expandable
- 8 MB RAM Exp. to 32 MB
- 1.2 MB FDD
- 340 MB SCSI Hard Drive
- MGP Display Card
- 14" Monochrome Monitor
- Full Tower Case W/250 PS
- Adaptec SCSI EISA Controller
- I/O 2 Serial/1 Parallel/1 Game Port
- 101 Enhanced Keyboard

**For More Options,  
Please Call**

## HITRON HIGH PERFORMANCE SYSTEMS

**486DX2-66 MHz  
\$1335**

**486DX-50 MHz  
\$1265**

**486DX2-50 MHz  
\$1215**

**486DX-33 MHz  
\$1115**

- 128K Cache Expandable to 256K
- 4 MB RAM Exp. to 32 MB
- 1.2 MB FDD
- 120 MB IDE Hard Drive
- SVGA Display Card w/512K
- 14" SVGA Color Monitor w/.28dp (1024x768)
- Mini Tower Case W/200 PS
- 2 FDD/2 HDD IDE Controller Card
- I/O 2 Serial/1 Parallel/1 Game
- 101 Enhanced Keyboard
- Upgrade To Local Bus Add. \$100 More

## BLOWOUT SPECIALS!

**486SX-33 MHz  
\$945**

**486SX-25 MHz  
\$885**

**386DX-40 MHz  
\$805**

**386DX-33 MHz  
\$805**

- 128K Cache Expandable to 256K
- 4 MB RAM Exp. to 32 MB
- 1.2 MB FDD
- 120 MB IDE Hard Drive
- SVGA Display Card w/512K RAM
- 14" SVGA Color Monitor w/.39dp (1024x768)
- Mini Tower Case W/200 PS
- 2 FDD/2 HDD IDE Controller Card
- I/O 2 Serial/1 Parallel/1 Game
- 101 Enhanced Keyboard

## HITRON NOTEBOOKS

**386SLC-25  
w/4 MB,  
16K Cache  
\$1315**

- 120 MB Hard Disk
- 1.44 MB Floppy Drive
- VGA Resolution
- I/O-1 Serial/1 Printer Port
- Ext. Keyboard and VGA Connector
- Carrying Case
- DOS 5.0 and Windows 3.1

**PAGERS FOR LESS  
ONLY \$69**

**OR BUY ANY  
HITRON  
SYSTEM OVER  
\$1500 AND GET  
A PAGER FOR  
ONLY  
\$59**



## MOTHERBOARD

NICE EISA 486-33/50/66. .... **CALL**

MICRONICS VLB 486-33/66. .... **CALL**

AMI VLB 486-20/25/33/50/66 .... **CALL**

FREE VLB 486-20/25/33/50/66 .... **CALL**

JOINDATA 386DX-33/40 .... **CALL**

JOINDATA 386SX-25/33 .... **CALL**

## HARD DRIVES

40 MB (IDE) ..... **\$139**

80 MB (IDE) ..... **155**

170 MB (IDE) ..... **205**

250 MB (IDE/SCSI) ..... **275/320**

340 MB (IDE/SCSI) ..... **305/405**

500 MB (IDE/SCSI) ..... **CALL**

1.2 GIGA ..... **CALL**

## NETWORKING

NE1000 Clone (COAX) ..... **\$69**

NE2000 Clone (COAX/TP) ..... **85/95**

NE2000 Combo Clone ..... **110**

Intel EtherExpress COAX/TP ..... **135/145**

SMC Etherlink II ..... **165**

LANtastic Software ..... **CALL**

Novell NetWare 4.0 ..... **CALL**

## VIDEO CARDS

MGP ..... **\$12**

Trident SVGA w/1MB ..... **60**

Tseng SVGA w/1 MB ..... **80**

Tseng VLB w/1 MB ..... **109**

Genoa VLB w/1 MB ..... **129**

Orchid Pro IIs w/1 MB ..... **139**

Fahrenheit w/1 MB ..... **139**

Fahrenheit w/1 MB VLB ..... **150**

Fahrenheit P9000 VLB ..... **CALL**

Diamond Stealth 24 w/1 MB ..... **189**

Diamond Stealth 24 VLB w/1 MB ..... **CALL**

ATI Winder XL 24X w/1 MB ..... **156**

ATI Vantage 1 MB w/Mouse ..... **235**

ATI Ultra Pro VLB w/2 MB ..... **359**

## CASES

Full Tower w/250W PS ..... **\$110**

Black Full Tower w/250W PS ..... **160**

Mid Tower w/230W PS ..... **89**

Black Tower w/200 PS ..... **98**

Black Mini Tower w/200W PS ..... **75**

Baby Desktop w/200W PS ..... **60**

## MONITORS

14" Monochrome ..... **\$98**

14" VGA Mono ..... **125**

14" SVGA .39 ..... **239**

15" SVGA .28 ..... **259**

14" SVGA .28 NI ..... **285**

14" Black SVGA .28 ..... **295**

14" Black SVGA .28 NI ..... **350**

14" ViewSonic 6E .28 ..... **325**

14" ViewSonic 5E .28 ..... **399**

14" ViewSonic 5+ .25 ..... **509**

14" Sony 1304 .25 ..... **560**

15" ViewSonic 6FX ..... **570**

15" NEC 3FGE ..... **CALL**

15" NEC 4FGE ..... **CALL**

17" ViewSonic 7 ..... **CALL**

17" NEC 5FGX ..... **CALL**

20" ViewSonic 8 ..... **CALL**

20" NEC 6FG ..... **CALL**

ADI ..... **CALL**

**HI-TECH ELEGANT  
BLACK CASE SYSTEM  
ONLY \$80 MORE**

## MISC.

1.2 MB FDD ..... **\$55**

1.44 MB FDD ..... **52**

IDE w/ I/O ..... **17**

2400 B Modem ..... **45**

9600/2400 FAX/Modem ..... **75**

120 MB Tape Back-Up ..... **158**

250 MB Tape Back-Up ..... **239**

101 Keyboard ..... **35**

101 Black Keyboard ..... **40**

**INEXPENSIVE  
SERVICE  
AVAILABLE  
FOR YOUR COMPUTER  
ONLY \$30  
PER HOUR**

FOR MORE OPTIONS OR INFORMATION PLEASE CALL:



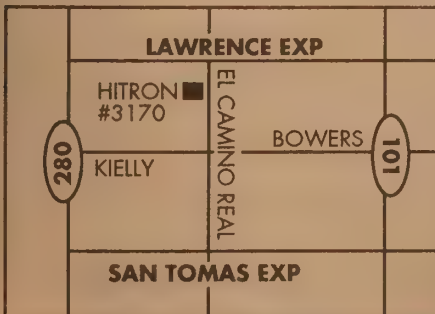
**HITRON SYSTEMS**

**3170 EL CAMINO REAL  
SANTA CLARA, CA 95051**

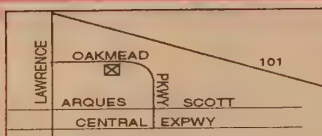
(BETWEEN LAWRENCE EXP. & SAN TOMAS EXP.)

**TEL: (408) 261-2695 • Fax: (408) 261-2698**

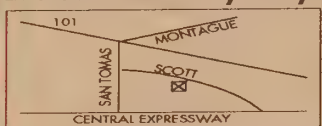
MON-FRI: 9-6 SAT: 10:30-4:30







1290 Oakmead Pkwy • Sunnyvale



3070 Scott Blvd • Santa Clara

**408/  
738-8297**

Fax 408/738-8299

**408/  
980-0669**

Fax 408/980-0604

# newriver

## PERIPHERALS

HARD DISKS

### Quantum™

|                          |              |
|--------------------------|--------------|
| 240MB LPS240A .....      | <b>\$225</b> |
| 525MB LPS525A IDE .....  | <b>555</b>   |
| 525MB LPS525S SCSI ..... | <b>575</b>   |
| 1.2GB PD1225S SCSI ..... | <b>975</b>   |
| 1.8GB PD1800S SCSI ..... | <b>1445</b>  |

### FUJITSU

|                     |              |
|---------------------|--------------|
| 520MB M2624T .....  | <b>\$595</b> |
| 1.0GB 2694ESA ..... | <b>975</b>   |
| 2.0GB M2654SA ..... | <b>1775</b>  |

### Maxtor®

#### Super Fast SCSI -2!

|                         |               |
|-------------------------|---------------|
| MXT-1240S 8.5ms ...     | <b>\$1195</b> |
| MXT-540S 540MB 8.5ms .. | <b>745</b>    |
| <b>Great Value!</b>     |               |
| P1-17S 1.5GB 13ms ..... | <b>1095</b>   |
| 245MB IDE 7245A .....   | <b>225</b>    |
| 345MB IDE 7345A .....   | <b>295</b>    |

### TOSHIBA

|                     |              |
|---------------------|--------------|
| 877MB MK438FB ..... | <b>\$795</b> |
| 1.2GB MK538FB ..... | <b>955</b>   |

### CONNER

|                     |              |
|---------------------|--------------|
| 120MB CP30104 ..... | <b>\$160</b> |
| 250MB CP30254 ..... | <b>225</b>   |

### MICROPOLIS®

#### Largest Capacity IDE

|                          |               |
|--------------------------|---------------|
| 1.75GB MC2217 10ms.      | <b>\$1495</b> |
| 1.2GB MC2112A 10ms ..... | <b>995</b>    |

#### Super Fast SCSI

|                     |             |
|---------------------|-------------|
| 1.3GB MC1528 .....  | <b>995</b>  |
| 1.75GB MC2217 ..... | <b>1495</b> |
| 2.0GB MC1924 .....  | <b>1895</b> |

MOTHERBOARDS



### American Megatrends

#### SuperVoyager II 486-33/66

|                  |                  |
|------------------|------------------|
| 256k Cache ..... | <b>\$695/895</b> |
|------------------|------------------|

#### Enterprise IV 486-33/66

|                           |                 |
|---------------------------|-----------------|
| EISA VLB 256k Cache ..... | <b>975/1195</b> |
|---------------------------|-----------------|

#### Enterprise III 486-33/66

|                           |                 |
|---------------------------|-----------------|
| EISA VLB 256k Cache ..... | <b>875/1095</b> |
|---------------------------|-----------------|

#### Baby Eisa 486-33/66 ....

|                |
|----------------|
| <b>599/799</b> |
|----------------|

#### NEW! FastDisk SCSI VLB .....

|             |
|-------------|
| <b>CALL</b> |
|-------------|

#### FastDisk NC .....

|            |
|------------|
| <b>295</b> |
|------------|

Call or fax in your custom computer configuration

### MICRONICS



### ORCHID

### NICE

### Prima-USA

### Guaranteed Low Prices

SUPER DEALS

### SIMMS

1MB x 3 - 70ns

**\$39.95**

|                   |      |
|-------------------|------|
| 4MB x 9 - 70ns .. | CALL |
| 1MB x 36 .....    | CALL |
| 4MB x 36 .....    | CALL |
| 486 CPU's .....   | CALL |

### FREMONT STORE INVENTORY CLEARANCE - LIMITED QUANTITY

|                                     |             |                                     |              |
|-------------------------------------|-------------|-------------------------------------|--------------|
| HAYES 2400B Ext. Modem .....        | <b>\$36</b> | ORCHID Fahrenheit VA/VLB .....      | <b>\$175</b> |
| AMI FastView EISA .....             | <b>175</b>  | IRWIN Tape Back up 120MB .....      | <b>95</b>    |
| ADTECH Hyper 14.4 Fax Modem ....    | <b>128</b>  | PRIMA (appian) VLB-IDE I/O .....    | <b>49</b>    |
| TEXEL DM5024 Ext. CD ROM .....      | <b>425</b>  | MAXTOR SCSI 80MB .....              | <b>99</b>    |
| TOSHIBA XM3401 Ext. CD ROM ....     | <b>525</b>  | MAXTOR SCSI 200MB .....             | <b>179</b>   |
| MITSUMI Int. CD ROM .....           | <b>145</b>  | QUANTUM 105 IDE .....               | <b>99</b>    |
| SONY 1430 14" Monitor .....         | <b>565</b>  | QUANTUM 127 SCSI .....              | <b>109</b>   |
| MAGNAVOX Mono-VGA Monitor .....     | <b>85</b>   | TOSHIBA 2.88MB Floppy Drive .....   | <b>59</b>    |
| TEAC 1.44MB 3.5" Floppy Drive ..... | <b>39</b>   | NORTHGATE 102 Keyboard .....        | <b>52</b>    |
| TEAC 1.2MB 5.25" Floppy Drive ..... | <b>47</b>   | SOLUTIONS 486-33 MB, no CPU .....   | <b>50</b>    |
| TEAC 1.44/1.2MB Combo Floppy Drive  | <b>115</b>  | QUICKPATH Portfolio Super I/O ..... | <b>89</b>    |



# HURRY! Don't Miss This Limited Super Sale!

|         |                 |     |
|---------|-----------------|-----|
| Christy | 088             | 089 |
| X       | Auto Mall Pkwy. |     |
|         | Durham          |     |

43102 Christy St. • Fremont

|                |        |              |         |     |
|----------------|--------|--------------|---------|-----|
| STANFORD       | COMPER | TASSO        | WEBSTER | 101 |
| EL CAMINO REAL |        | UNIVERSITY   |         |     |
|                |        | FREE PARKING |         |     |

540 University • Palo Alto

Price & Availability subject to change w/o notice.  
No surcharge for credit cards.  
Not responsible for typos.  
All items brand new with manufacturer's warranty.  
All brands are registered trademarks

## 510/623-9125

Fax 510/623-7592

## 415/473-9050

Fax 415/325-2459



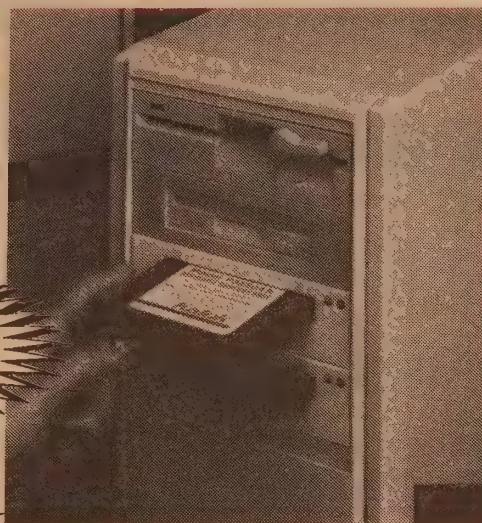
# K-STOR

## Removable Hard Drive Kit

- 250MB
- 3.5"
- IDE-AT

### \$495

\$100 off with this ad  
until 9-30-93



## Fast SCSI CD ROMS!

# TEAC

CD-50

SCSI 2

### \$325

# TOSHIBA

3401B

Internal

### \$385

# RICOH

Super-fast, ultra-reliable  
data transfer & storage

## Magneto-Optical

**\$725** RS **\$895**  
3100

internal

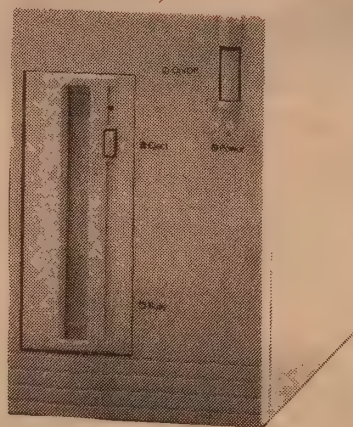
external

## Recordable Compact Disk

RS-9200EX

- High Speed

### \$CALL



## Maxoptix Tahiti IIIm

## Magneto-Optical

1MB

4MB

### \$2395

### \$2695

# FUJITSU

- 128MB
- 3.5"
- M2511A

## Rewritable Optical Disk Drive

### \$795

## Back-to-School Special

- Intel 486DX-33 CPU
- 4MB RAM
- 130MB Hard Disk
- Teac 1.44MB FD
- IDE I/O 2s, 1p
- SVGA Monitor .28
- SVGA 1MB Card
- Mini Tower Case
- 101 Keyboard
- Serial Mouse

Complete System

### \$1095

486SX-25 \$995  
486DX2-66 1295

Sale ends 9-30-93

GAMES for Nintendo,  
Sega, Genesis, IBM, Mac  
in Palo Alto

Macintosh Products  
call  
415/473-9050  
in our Palo Alto Store

SPECIAL OPTICAL DRIVES REMOVABLE



# Multimedia & beyond

Continued from page 225

color and high-color modes shared by its competitors. Users may be excited by NDI's 800 x 600 display driver, which supports 64K colors.

Documentation is adequate, with clear and well-illustrated instructions. One minor discrepancy is the lack of an IRQ jumper selector on the card that is illustrated in the book. The book also lacks a full description of the 1152 x 900 pixel mode. A unique feature, the 1152 x 900 resolution option offers an attractive higher-res display on standard 1024 x 768 monitors (I couldn't get this display mode to work on my Seiko, however). The card also includes the refresh rate DIP switches common to other cards in its class and their adjustment is adequately documented. Driver installation is strictly standard DOS or Windows setup-based. The Windows drivers deliver a crisp, clear image, particularly with the Small Fonts option.

In the end, the Warp 10 is an inexpensive, high-quality card with average performance for its class. That shouldn't dissuade you: such performance runs rings around

any basic VGA card, or any of the first-generation Windows accelerators such as the Diamond Stealth. Its unique characteristics are support for an 1152 x 900 pixel screen on standard 14", 1024 x 768 multi-sync monitors, with support for 64K colors in 800 x 600 mode.

## VL-BUS CARDS

### Orchid Fahrenheit VA-VLB

Orchid's VL-Bus offering is simply a fine product. The card averages 30% faster than its ISA cousin, offers the same voice annotation features, and offers a nice hardware pan and zoom feature. The Fahrenheit VL-Bus card also provides 2MB of 60ns DRAM, enabling the display of 256 colors in 1280 x 1024 resolution.

## VL-BUS VS. ISA

The Fahrenheit VL-Bus is based on yet another S3 chip, called the 86C805. This is

a DRAM-based chip similar to the 86C801, but adds full 32-bit support of the VESA Local Bus and greater RAM support. We're fairly sure, as a result, that comparing the ISA and VL-Bus Fahrenheit cards can help us answer the question: does VL-Bus make a difference? The answer is: yes, it does, up to a point.

Consider that the 16-bit ISA bus runs at 8MHz, while the VL-Bus generally runs at 33MHz. You'd expect a fourfold increase in video speed. It doesn't happen. You'll generally see around a 20%-30% boost in speed for comparable cards on the same computer. Oddly enough, this roughly matches the price difference between ISA and VL-bus cards in the same line. In many cases, you won't be able to see the difference. In word processing and text scrolling routines, the difference is imperceptible! Full-screen redraws, however, are noticeably quicker. In benchmarks, the Orchid turns in a solid 13.0 WinMark score—the best of the '805-based VL-Bus cards seen so far.

Fahrenheit's driver installation is ele-

## FAX / MODEM

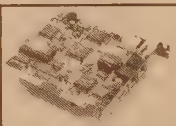
Direct from Wholesaler

Proven Reliability  
5 Year Warranty

For WINDOWS: SEND/RECEIVE FAX MODEM + WINFAX & DOS Softwares

☆ SPECIAL ☆ **MODEL 9624HWIN (Internal) with WINFAX** **\$58**  
FAX S/R 9600/9600bps, MODEM 2400bps MNP 5 Retail \$199

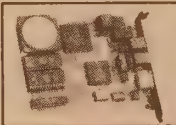
### INTERNAL



**MODEL 2400H** **MODEM SPEED 2400bps**  
MNP 5 V.21,V.22,V.22bis,V.23, Hayes Modem Compatible, DOS softwares Retail \$79 **\$25**

**MODEL 9624SH FAX Send 9600bps**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$89 **\$29**

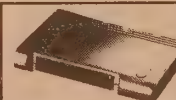
**MODEL 9648AH FAX Send / Receive 9600bps/4800bps**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$129 **\$45**



**MODEL 9624H FAX Send / Receive 9600bps/9600bps**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$149 **\$49**

**MODEL 1414VH FAX Send / Receive 14400bps/14400bps**  
MODEM speed 14400bps MNP 5 V.32/V.42 GIII FAX Hayes DOS softwares Retail \$399 **\$145**

### EXTERNAL

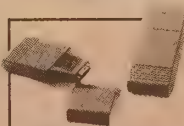


**MODEL 9624E FAX Send / Receive 9600bps/9600bps**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$189 **\$74**

**MODEL 9624VQE FAX Send / Receive 9600bps/9600bps**  
MODEM speed 2400bps MNP 5 V.32/V.42 GIII FAX Hayes DOS softwares Retail \$189 **\$89**

**MODEL 1414VE FAX Send / Receive 14400bps/14400bps**  
MODEM speed 14400bps MNP 5 V.32/V.42bis GIII FAX Hayes DOS softwares Retail \$449 **\$175**

### POCKET SIZE



**MODEL 9624SP FAX Send 9600bps (Pocket/External)**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$199 **\$59**

**MODEL 9624P FAX Send / Receive 9600bps/9600bps**  
MODEM speed 2400bps MNP 5 GIII FAX, Hayes Comp. DOS softwares Retail \$199 **\$79**

**MODEL 1414VQP FAX Send / Receive 14400bps/14400bps**  
MODEM speed 14400bps MNP 5 V.32/V.42bis GIII FAX Hayes DOS softwares Retail \$499 **\$199**

☆ **WINFAX(\$10) or SuperFax(\$5) for Windows w/Manual** (Purchase with above product)

☆ **Model 3000B Phone/Fax/Modem/Answering Auto Switch Device** uses for a Single phone line **\$59**

### YOKOHAMA Telecom Corp.

4095-M E. La Palma Ave.  
Anaheim, CA 92807

Tel: 714-630-4061

Fax Order: 714-630-5069

ORDER CALL: 1-800-YOKOHAMA

Call for Dealer Q'ty Discount

MON. - FRI. : 9:00AM TO 6:00PM  
SAT. : 9:00AM TO 3:00PM

Price, availability and specifications subject to change

#### ORDER FORM:

| MODEL NO.                      | x Quantity | = Amount |
|--------------------------------|------------|----------|
|                                | x          | =        |
|                                | x          | =        |
|                                | x          | =        |
|                                | x          | =        |
| <b>SUB-TOTAL</b>               |            | =        |
| CA Resident add Tax (x 0.0775) |            | =        |
| Shipping & Handling Charge     |            | = \$4.00 |
| <b>GRAND TOTAL</b>             |            | =        |

Send to: **YOKOHAMA Telecom Corp.**  
P.O. Box 626 Atwood, CA 92601

Your Name: \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Tel: \_\_\_\_\_

☐ VISA ☐ MC OR ☐ INCLUDE CHECK \$

Card No. \_\_\_\_\_ Exp: \_\_\_\_\_

Sign. \_\_\_\_\_



# Powerful 486 Notebooks . . . .

## Texas Instruments TravelMate 4000 Computer



**TI TravelMate 4000E Color**  
486DX2/50MHZ, 4MB RAM EXP. TO 20MB  
VGA 640x480, TFT ACTIVE VGA COLOR  
1.44 FD, 200MB HD, DOS6.  
BALLPOINT MOUSE, WINDOWS 3.1.

**\$ BEST**

486DX2/40MHZ, 8MB RAM EXP. TO 20MB  
SUPPORT VGA 640x480, 1024X768 color  
1.44 FD, 200MB HD, BALLPOINT MOUSE  
DOS6, WINDOWS 3.1. Battery Pack.

**\$ BEST**

486SX-25MHZ, 4MB RAM EXP. TO 20MB  
VGA 640x480, TFT ACTIVE VGA COLOR  
120MB HD, BALLPOINT MOUSE  
DOS6, WINDOWS 3.1, Battery Pack.

**\$2199**



**TI TravelMate 4000 Mono**  
486SX/DX-25MHZ, 4MB RAM EXP. TO 20MB  
SUPPORT 640X480, 800X600, 1024X768.  
1.44 Floppy drive, 120MB HD, MOUSE  
DOS6, WINDOWS 3.1, L.T. MANAGER

**\$1859/25SX \$1959/25DX**

486DX2/50MHZ, 8MB RAM EXP. TO 20MB  
SUPPORT 640X480, 800X600, 1024X768.  
1.44 Floppy drive, 200MB HD, MOUSE  
DOS6, WINDOWS 3.1, Battery Pack

**\$2959**

486-25WinSLC, 4MB RAM EXP. TO 6MB  
SUPPORT VGA 640x480, 800X600  
1.44 Floppy drive, 80MB HD, MOUSE  
DOS6, WINDOWS 3.1, Battery Pack.

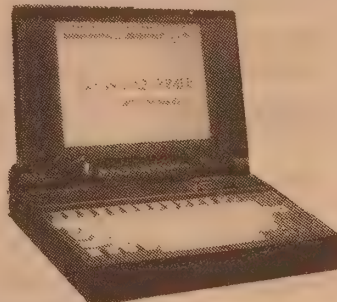
**\$1459**

## TOSHIBA NOTEBOOK



**T1900/T1900C . . . . \$BEST**  
**T4500/T4500C . . . . \$BEST**  
**T4600/T4600C . . . . \$BEST**

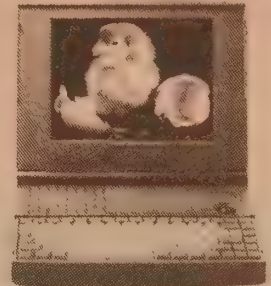
## HYPERBOOK 2300 DX/DLC



486CPU, 4MB RAM exp. to 20MB  
VGA 9" LCD display, 120MB HD  
Build-in Hand Scanner Port, Modem, Fax  
One SCSI 2 Port, Serial, Parallel Port.

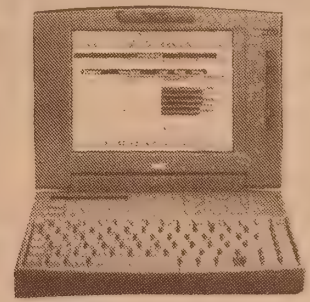
**\$2399<sub>50DX2</sub> / \$2199<sub>40DLC</sub>**

## McTEK 6500 ACTIVE COLOR



486DX CPU, 4MB RAM EXP. TO 20MB  
10" Active Color,  
1.44 Floppy drive, 120MB HD, MOUSE  
DOS6, WINDOWS 3.1, PCMCIA Type 2 or 3  
**\$3699<sub>50DX</sub> / \$3859<sub>66DX</sub>**

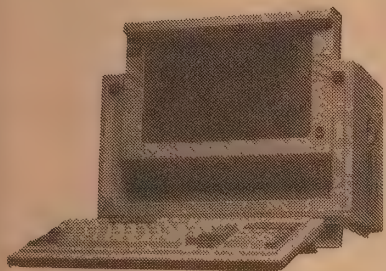
## NEC UltraLite VERSA



- i486SL /25 or 33 MHz
- 4 MB RAM up to 12MB
- 120MB, 180MB HD
- Active Color

**Call**

## LCD Portable



80386-40DX, LCD / G.P. / Active color  
1MB RAM EXP. TO 32MB, 120MB HD  
1.2 OR 1.44MB FD, CRT AND KB PORT  
Also available in 486-33/55/66DX or SLC

| LCD           | Gas Plasma    | Active Color  |
|---------------|---------------|---------------|
| <b>\$1459</b> | <b>\$1659</b> | <b>\$3559</b> |

## CRT Portable



- 80386-40DX, 1MB RAM exp. to 32MB
- 3 Expansion Slot, SVGA 0.28mm
- 1.2 or 1.44MB FD, 120MB HD
- 2 Serial, 1 Parallel Port.
- Available in 486/33/50/66

**\$1799**

## McTEK 486-33 / 50 / 66DX

- Intel 486DX CPU W/256k CACHE
- 1.2MB FLOPPY DRIVE
- 4MB RAM, 250MB Hard Disk
- 2Serial 1Parallel 1Game Port

33DX 50DX 66DX/2

|      |        |        |        |
|------|--------|--------|--------|
| VESA | \$1159 | \$1359 | \$1399 |
| EISA | \$1359 | \$1555 | \$1599 |

## IBM 486-50/66SLC VESA

- IBM 486-50 CLC2-50 CPU W/64k CACHE
- 1.2MB FLOPPY DRIVE
- 4MB RAM, 250MB Hard Disk
- 2Serial 1Parallel 1Game Port

**\$1195 \$1295**

## Monitors / Video Card

|                                  |        |
|----------------------------------|--------|
| Trident VGA w/1MB . . . . .      | \$79   |
| Tseng Lab VGA w/1MB . . . . .    | \$99   |
| Fahrenheit w/1MB . . . . .       | \$159  |
| Fahrenheit 1280 VL Bus . . . . . | \$189  |
| Diamond Stealth 24 . . . . .     | \$179  |
| Diamond Speed Star w/1MB \$139   |        |
| Diamond Speed Star VESA \$189    |        |
| Diamond StealthPro VESA \$289    |        |
| SVGA Monitor 0.28mm . . . . .    | \$279  |
| SVGA Monitor non-interlaced\$299 |        |
| Viewsonic 6FS (15"). . . . .     | \$559  |
| NEC 3FGe . . . . .               | \$599  |
| NEC 4FGe . . . . .               | \$695  |
| NEC 5FGe . . . . .               | \$1099 |
| NEC 6FG . . . . .                | \$2459 |
| Sony 1430 . . . . .              | \$599  |
| Sony 1730 . . . . .              | \$1199 |

## Printer

|                                    |            |
|------------------------------------|------------|
| Cannon BJ10ex/BJ200 . . . . .      | \$289/299  |
| Epson 2250 / 3250 . . . . .        | \$155/199  |
| HP 4L/4LM . . . . .                | \$699/1099 |
| HP 4/4M . . . . .                  | Call       |
| HP4 SI / 1200C . . . . .           | Call       |
| IBM 4019/4029 . . . . .            | \$789/989  |
| IBM 4079 . . . . .                 | \$2659     |
| NEC 95F . . . . .                  | \$899      |
| NEC 97 . . . . .                   | Call       |
| Panasonic KXP2123/2124 \$259/309   |            |
| Panasonic KXP1624/2624 \$379/399   |            |
| Panasonic KXP4410/4430 \$559/699   |            |
| TI MicroMarc 300cps LQ . . . . .   | \$299      |
| TI Laser Printer (Basic) . . . . . | \$549      |
| TI Laser Printer (PS23) . . . . .  | \$729      |
| TI Laser Printer (PS65) . . . . .  | \$999      |
| TI Laser Printer (Turbo) . . . . . | \$1399     |

## Misc. & Tape drive

|                                     |           |
|-------------------------------------|-----------|
| 120MB IDE . . . . .                 | Call      |
| 200MB / 250MB IDE . . . . .         | Call      |
| 340MB / 550MB . . . . .             | Call      |
| <b>FAX / MODEM</b>                  |           |
| US Robotics 14.4 Int/Ext \$179/225  |           |
| VIVA 14.4 Int/Ext . . . . .         | \$169/189 |
| VIVA 14.4 Pocket . . . . .          | \$289     |
| Intel 14.4 Int. . . . .             | \$165     |
| Practical 14.4 Mini Tower . . . . . | \$229     |
| Practical 14.4 Pocket . . . . .     | \$395     |
| Smartlink 14.4 Int. . . . .         | \$159     |
| <b>Tape Backup</b>                  |           |
| Colorado 120MB Int. . . . .         | \$139     |
| Colorado 250MB Int. . . . .         | \$179     |
| Colorado Tranker 120MB . . . . .    | \$325     |
| Colorado Tracker 250MB . . . . .    | \$375     |

## MultiMedia

|                                                                                                                           |                  |
|---------------------------------------------------------------------------------------------------------------------------|------------------|
| Sound Blaster Pro 16 Asp . . . . .                                                                                        | \$225            |
| Video Blaster . . . . .                                                                                                   | \$319            |
| Discovery CDROM Kit . . . . .                                                                                             | \$469            |
| Proaudio 16 . . . . .                                                                                                     | \$169            |
| Promovie2 . . . . .                                                                                                       | \$319            |
| NEC CDROM 74 Ext. . . . .                                                                                                 | \$499            |
| Toshiba 3401 CDROM . . . . .                                                                                              | \$429            |
| <b>Fusion CD16 Sound System</b>                                                                                           |                  |
| Sony Internal CD ROM ;Pro Audio Spectrum 16 stereo sound card; Labtec stereo speaker; Four windows sound programs         |                  |
| Internal / External . . . . .                                                                                             | <b>\$499/429</b> |
| <b>Fusion Double 16 Sound System</b>                                                                                      |                  |
| NEC Internal CD ROM ;Pro Audio Spectrum 16 stereo sound card; Meets all MPC Level II specifications; 7 software packages. |                  |
| Internal . . . . .                                                                                                        | <b>\$899</b>     |

## McTek Systems, Inc.

1521 San Pablo Ave. Berkeley, Ca 94702  
Tel : (510) 525-5129

## HOURS

**M - F 09:30 - 18:30**  
**SAT 11:00 - 16:00**

## VISA / MASTER ACCEPTED



ALL PRICES SUBJECT TO CHANGE

**FINANCE, LEASING,  
UPGRADE, TRAINING  
AVAILABLE**



# MultiMedia & beyond

gant, and changing screen resolutions is a simple matter. You must adjust DIP switches for the proper refresh rate, which may be a headache for the average user. So far, the Fahrenheit VL-Bus card is absolutely reliable in all screen modes, and is compatible with the Windows Super VGA 800 x 600 driver. The Fahrenheit VA also has some nice value-added features, such as voice annotation with a small microphone that plugs into the card. For its solid quality, the Fahrenheit VA-VLB gets a Best Product Award for this issue.

## STB's PowerGraph VL-24

In many respects, the VL-Bus version of the PowerGraph X-24 is nearly identical to its ISA cousin. The PowerGraph VL-24 is a functional, workmanlike product with a slightly lower than average price of \$269. Unlike every other VL-Bus card I've seen, the PowerGraph is limited to 1MB of 60ns DRAM, and cannot be upgraded. As with the Fahrenheit VLB, it runs on the S3 86C805 chip. The RAM capabilities of the PowerGraph card limit the card to 16-colors in 1280 x 1024 resolution. It does

support true color at 640 x 480 resolution, however.

As with the Orchid card, the PowerGraph VL-24 runs approximately 20% to 25% faster than its ISA counterpart. With a 12.1 WinMark and 15.8 WinTach scores, the STB card turns in respectable middle-of-the-pack performance. Its quality and speed are average in its class, and its driver set and documentation are competent and unspectacular. Screen images are typically sharp on the Seiko's Trinitron tube. The card is straightforward to install, and can be done from DOS or Windows. Lack of RAM expandability hurts this card's prospects in the marketplace, but that's the only major demerit against it. A decent, basic Local Bus card, but others in its price range surpass it in both quality and speed.

## CONCLUSIONS

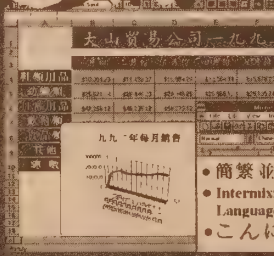
Cards based on the 86C801 S3 chip tend to bunch together in the same performance range; one card is pretty much like another,

assuming no major differences with the drivers. Out of the three looked at here, it's hard to pick a favorite. Even the slowest accelerators offer a substantial speed boost over standard VGA.

Many card makers claim twenty, twenty-five, or thirty times the speed of standard VGA graphics. Based on what comparisons? If nothing else, our tests should help you sort through the claims. Even the fastest card tested here barely manages an approximate sevenfold increase in speed, and this is on a 486-33 with Local Bus! Marketing claims of thirty fold increases seem a little thin and benchmarking can help put things in perspective.

Remember, benchmarks themselves are moving targets; results will vary with systems. The two best values in our survey so far are the ISA PowerGraph X-24 for its exceptionally low price and solid performance, and the Local Bus Fahrenheit VA-VLB from Orchid Corporation. A user could not go wrong with either of Orchid's Fahrenheit cards. ■

## 雙橋 TwinBridge™

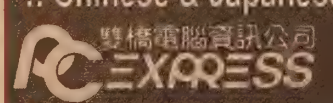



**New Release V3.2**  
Starting at \$99

### Breaks The Language Barrier

- ★ Use Chinese/Japanese in English Windows applications, such as Word, Access, Ami Pro, PageMaker, PowerPoint, WordPerfect, WinFax, etc.
- ★ Compatible with Microsoft Windows - Including Chinese, Japanese, English or other versions.
- ★ Support Windows For Workgroups and Novell Netware.
- ★ Include the 10 most popular input methods for Chinese, and 5 for Japanese.
- ★ Support both Traditional and Simplified Chinese characters.
- ★ Bi-Lingual manual - English and Chinese/Japanese.
- ★ Scalable Chinese/Japanese Fonts.
- ★ Users Include AT&T, American Express, AMOCO, Beijing University, Chinese Consulate General in U.S., Harvard, Mitsubishi, NEC, Princeton, Taiwan University, UCLA, Unisys, US Embassy in China, World Bank, Yale and more...

**!! Chinese & Japanese made easy !!**



820 S. Garfield Ave. Suite 201  
Alhambra, CA 91801 USA  
Tel: 818-293-1661 Fax: 818-293-1665

**Character Language resources**  
2130 Sawtelle Blvd. 300B  
Los Angeles Ca 90025  
Tel: 800-569-2099 Fax: 310-996-2303

**!! Reseller inquiry welcome !!**

**MED SCHOOL 400 WEEKS**

**LAW SCHOOL 300 WEEKS**

**CNE<sup>CLM</sup> SCHOOL 3 WEEKS!**

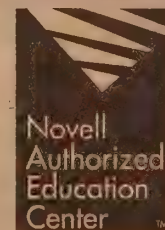
If time is money...

**CNE<sup>CLM</sup> School is  
TIME WELL SPENT!**

- Novell-Authorized
- Instructors with field experience.
- Exclusive CNE<sup>CLM</sup> Test Preparation.
- Certified NetWare Engineer Quick Course (1week)
- Satisfaction Guaranteed.

TIME IS WASTING.....so call today.

**CERTIFIED  
NETWORK  
EDUCATORS**  
1-800-9NOVELL





# TOP DATA SPECIALS

| SYSTEM                                                          | M/B & CPU | BASIC SYSTEM | BASIC SYS +40MB HDD +14" MONO & VGA CARD | BASIC SYS +40MB HDD +VGA CARD & MONITOR | BASIC SYS +40MB HDD +SVGA CARD & MONITOR | BASIC SYS +80MB HDD +SVGA CARD & MONITOR | BASIC SYS +120MB HDD +SVGA CARD & MONITOR | BASIC SYS +200MB HDD +SVGA CARD & MONITOR |
|-----------------------------------------------------------------|-----------|--------------|------------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|
| 486DX2-66C VLB                                                  | 519       | 689          | 879                                      | 979                                     | 1,009                                    | 1,059                                    | 1,079                                     | 1,129                                     |
| 486DX-50C VLB                                                   | 476       | 646          | 836                                      | 936                                     | 966                                      | 1,016                                    | 1,036                                     | 1,086                                     |
| 486DX-33C VLB                                                   | 343       | 513          | 703                                      | 803                                     | 833                                      | 883                                      | 903                                       | 953                                       |
| 486SX-33C VLB                                                   | 199       | 369          | 559                                      | 659                                     | 689                                      | 739                                      | 759                                       | 809                                       |
| 486DLC-40C VLB<br><small>87DLC40 Inc'd &amp; Upgradable</small> | 219       | 389          | 579                                      | 679                                     | 709                                      | 759                                      | 779                                       | 829                                       |
| 486DLC-33C VLB                                                  | 189       | 359          | 549                                      | 649                                     | 679                                      | 729                                      | 749                                       | 799                                       |
| 486DX2-66C EISA                                                 | 549       | 719          | 909                                      | 1,009                                   | 1,039                                    | 1,089                                    | 1,109                                     | 1,159                                     |
| 486DX-50C EISA                                                  | 509       | 679          | 869                                      | 969                                     | 999                                      | 1,049                                    | 1,069                                     | 1,119                                     |
| 486DX-33C EISA                                                  | 379       | 549          | 739                                      | 839                                     | 869                                      | 919                                      | 939                                       | 989                                       |
| 486DX2-66C ISA                                                  | 489       | 659          | 849                                      | 949                                     | 979                                      | 1,029                                    | 1,049                                     | 1,099                                     |
| 486DX-50C ISA                                                   | 459       | 629          | 819                                      | 919                                     | 949                                      | 999                                      | 1,019                                     | 1,069                                     |
| 486DX-40C ISA                                                   | 376       | 546          | 736                                      | 836                                     | 866                                      | 916                                      | 936                                       | 986                                       |
| 486DX-33C ISA                                                   | 326       | 496          | 686                                      | 786                                     | 816                                      | 866                                      | 886                                       | 936                                       |
| 486SX-33C ISA                                                   | 166       | 336          | 526                                      | 626                                     | 656                                      | 706                                      | 726                                       | 776                                       |
| 486SX-25C ISA                                                   | 136       | 306          | 496                                      | 506                                     | 536                                      | 586                                      | 606                                       | 656                                       |
| 486DLC-40C ISA                                                  | 189       | 359          | 549                                      | 649                                     | 679                                      | 729                                      | 749                                       | 799                                       |
| 486DLC-33C ISA<br><small>87DLC33 Inc'd &amp; Upgradable</small> | 159       | 329          | 519                                      | 619                                     | 649                                      | 699                                      | 719                                       | 769                                       |
| 486SLC-33C ISA                                                  | 129       | 299          | 489                                      | 589                                     | 619                                      | 669                                      | 689                                       | 739                                       |
| 486SLC-20C ISA                                                  | 119       | 289          | 479                                      | 579                                     | 609                                      | 659                                      | 679                                       | 729                                       |
| 386DX-40C ISA                                                   | 113       | 283          | 473                                      | 573                                     | 603                                      | 653                                      | 673                                       | 723                                       |
| 386SX-40 ISA                                                    | 79        | 249          | 439                                      | 539                                     | 569                                      | 619                                      | 639                                       | 689                                       |
| 386SX-33 ISA                                                    | 69        | 239          | 429                                      | 529                                     | 559                                      | 609                                      | 629                                       | 679                                       |
| 386SX-20 ISA                                                    | 63        | 233          | 423                                      | 523                                     | 553                                      | 603                                      | 623                                       | 673                                       |

BASIC SYSTEM: M/B & CPU, 1MB MEMORY, SUPER IDE(2HD/2FD w/2SIPIC), 1.44MB FD, MINI-TOWER CASE w/230W POWER SUPPLY & KEYBOARD.

## MONITORS

|                                                    |        |
|----------------------------------------------------|--------|
| 14" Mono Amber.....                                | 83     |
| 14" VGA Mono.....                                  | 106    |
| 14", VGA (640x480) .51.....                        | 173    |
| <b>ARCHE</b>                                       |        |
| 14", 214S39, .39, 1024 Int., 38KHz/100Hz.....      | 193    |
| 14", 214S28, .28, 1024 Int., 38KHz/100Hz.....      | 229    |
| 14", 214MH, .28, 1024 NI, 49KHz/100Hz.....         | 249    |
| 15", 215AX, .28, 1280 NI, Flat, Autocan.....       | 349    |
| 17", 217AH, .26, 1280 Int., Flat, Autocan.....     | 669    |
| Low Radiation Models (MPR II).....                 | \$Best |
| <b>CTX</b>                                         |        |
| 14", 5468, .28, 1024 Int., 38KHz/90Hz.....         | 249    |
| 14", 5468NI, .28, 1024 NI, 50KHz/90Hz.....         | 269    |
| 14", 1461, .28, 1024 NI, VESA Standards.....       | 299    |
| 15", 1561, .28, 1024 NI, Flat, 60KHz/90Hz.....     | 379    |
| 17", 1760DF, .28, 1280 NI, Flat, Digital Cntl..... | 709    |
| Low Radiation Models (MPR II).....                 | \$Best |
| <b>MAG</b>                                         |        |
| 15", MX15F, .28, 1280 NI, 68KHz/120Hz.....         | 509    |
| 17", MX17F, .26, 1280 NI, 68KHz/120Hz.....         | 919    |
| <b>NANAO</b>                                       |        |
| 15", F340iw, .28, 1024 NI, 72Hz.....               | 659    |
| 17", F550i, .28, 1280 NI.....                      | 1,009  |
| 17", T560i, .26, 1280 NI.....                      | 1,639  |
| 20", T660i, .31, 1280 NI, 72Hz.....                | 2,419  |
| 21", FT50i, .31, 1280 NI.....                      | 2,049  |
| <b>NEC</b>                                         |        |
| 15", 4FGe, .28, 1024x768 NI, 76Hz.....             | 679    |
| 17", 5FGe, .28, 1280x1024 NI, 74Hz.....            | 1,069  |
| 21", 6FGe, .28, 1280x1024 NI, 74Hz.....            | 2,299  |
| <b>VIEWSONIC</b>                                   |        |
| 14", 4E, .28, 1024 Int.....                        | 269    |
| 14", 5E, .28, 1024 NI, 72Hz, Mac II.....           | 359    |
| 14", 6E, .28, 1024 NI.....                         | 289    |
| 15", 15, .28, 1280 NI, MPRII, MacII, D. Cntl.....  | 529    |
| 17", 7, .28, 1280 NI, MPRII, MacII, D. Cntl.....   | 869    |
| 17", 17, .28, 1280 NI, 76Hz, MPRII, D. Cntl.....   | 1,049  |
| 20", 20, .28, 1280 NI, 76Hz, MPRII, D. Cntl.....   | 1,649  |

## VIDEO CARDS

|                                                 |     |
|-------------------------------------------------|-----|
| <b>ATI</b>                                      |     |
| Graphics Ultra, 1MB w Mouse.....                | 169 |
| Graphics Ultra+, 1MB, DRAM, 1280I, ISA.....     | 199 |
| Graphics Ultra+, 2MB, DRAM, 1280I, ISA.....     | 259 |
| Graphics Ultra Pro, 2MB VRAM, 1280NI, ISA.....  | 319 |
| Graphics Ultra Pro, 2MB VRAM, 1280NI, EISA..... | 359 |
| Graphics Ultra Pro, 2MB VRAM, 1280NI, VLB.....  | 319 |
| <b>DIAMOND</b>                                  |     |
| Speed Star Pro, 1MB, 1280I, 72Hz, ISA/VLB.....  | 109 |
| Stealth 24, 1MB, 1280I, 72Hz, ISA/VLB.....      | 159 |
| Stealth Pro, 1MB, 1280NI, 72Hz, ISA/VLB.....    | 269 |
| Stealth Pro, 2MB, 1280NI, 72Hz, ISA/VLB.....    | 339 |
| Viper, 2MB, 1280NI, 74Hz, P 900, VLB.....       | 369 |
| <b>GENOA</b>                                    |     |
| 8500, 1MB, VLB.....                             | 99  |
| <b>ORCHID</b>                                   |     |
| Fahrenheit 1280+, 1MB VRAM, 1280NI, ISA.....    | 139 |
| Fahrenheit 1280 VLB, 1MB, 1280, 72Hz.....       | 149 |
| Fahrenheit VA, 1MB, Voice Annotation.....       | 149 |
| Fahrenheit VA/VLB, 1MB, Voice Annotation.....   | 159 |
| P9000 VLB, 3MB.....                             | 339 |

## CONTROLLERS

|                                               |    |
|-----------------------------------------------|----|
| IDE 2FD/2HD with 2S/1P/1G.....                | 16 |
| IDE 2FD/2HD Cache Controller(OK).....         | 99 |
| IDE VESA 2FD/2HD w/2S/1P/1G & Anti-Virus..... | 39 |
| IDE CO-EXIT Cntr (work w/MFM, RLL etc).....   | 35 |
| MFM 2FD/2HD.....                              | 39 |
| SCSI 2FD/7HD 16-bit ISA w/driver.....         | 89 |

## PRINTERS

|                                            |         |
|--------------------------------------------|---------|
| <b>EPSON</b>                               |         |
| KX-P1123/P1124i (24 Pin).....              | 169/239 |
| KX-P1624 (24 Pin) Wide.....                | 348     |
| KX-P2180 (9 Pin).....                      | 158     |
| KX-P2023 (24 Pin) Quiet.....               | 198     |
| KX-P2123/2124 (24 Pin) Color capacity..... | 219/318 |
| KX-P2624 (24 Pin) Quiet Wide.....          | 378     |

## NETWORKING

|                                                                                                                                       |        |
|---------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>ARTISOFT STARTER KIT</b>                                                                                                           |        |
| 2xLANtastic/AT Operating System, 2x16 Bit Coax Ethernet Adapters, 1x25" Coax Cable, 2x" T" Connectors & 2xTerminators.....            | 289    |
| For Windows.....                                                                                                                      | 319    |
| <b>INVISIBLE STARTER KIT</b>                                                                                                          |        |
| 2xInvisible Operating System for Windows, 2x16 Bit NE2000 Ethernet Adapters, 1x25" Coax Cable, 2x" T" Connectors & 2xTerminators..... | 279    |
| <b>MICROSOFT WORKGROUP STARTER KIT</b>                                                                                                |        |
| 2xMicrosoft Workgroup for Windows, 2x16 Bit NE2000 Ethernet Adapters, 1x25" Coax Cable, 2x" T" Connectors & 2xTerminators.....        | 289    |
| <b>NOVELL NETWORK LITE STARTER KIT</b>                                                                                                |        |
| 2xNetwork Lite Operating System, 2x16 Bit NE2100 Ethernet Adapters, 1x25" Coax Cable, 2x" T" Connectors & 2xTerminators.....          | 179    |
| <b>3COM</b>                                                                                                                           |        |
| Etherlink III (3C509) Adapter.....                                                                                                    | 149    |
| Etherlink III EISA (3C579).....                                                                                                       | 249    |
| <b>INTEL</b>                                                                                                                          |        |
| EtherExpress 16 Coax.....                                                                                                             | 129    |
| EtherExpress 16 TP.....                                                                                                               | 139    |
| EtherExpress FlashC (Combo).....                                                                                                      | 139    |
| EtherExpress 32 EISA.....                                                                                                             | 409    |
| TokenExpress 16/4 ISA.....                                                                                                            | 535    |
| TokenExpress 16/4 EISA.....                                                                                                           | 685    |
| <b>NOVELL</b>                                                                                                                         |        |
| NETWARE 5/10/20/50 Users.....                                                                                                         | \$Best |
| <b>SAC</b>                                                                                                                            |        |
| EtherCard Plus Elite 16 Coax.....                                                                                                     | 129    |
| EtherCard Plus Elite 16T (10 BT).....                                                                                                 | 129    |
| EtherCard Plus Elite 16 Combo.....                                                                                                    | 156    |
| Ethernet Elite 32 EISA.....                                                                                                           | 649    |
| <b>MATH COPROCESSORS</b>                                                                                                              |        |
| 387SX-25/33.....                                                                                                                      | 53/56  |
| 387DX-33/40.....                                                                                                                      | 56/59  |

## HARD DRIVES

|                      |         |
|----------------------|---------|
| 40MB/80MB IDE.....   | 103/149 |
| 120MB/130MB IDE..... | 159/169 |
| 170MB/200MB IDE..... | 169/199 |
| 250MB/340MB IDE..... | 223/279 |
| 420MB/540MB IDE..... | 399/569 |
| SCSI HARD DRIVE..... | \$BEST  |

## CASE WITH POWER SUPPLY

|                             |    |
|-----------------------------|----|
| Mini Tower w/230w.....      | 49 |
| Desktop Baby AT w/230w..... | 49 |
| Medium Tower w/230w.....    | 79 |
| Full Tower w/250w.....      | 99 |

## CD-ROM / MULTIMEDIA

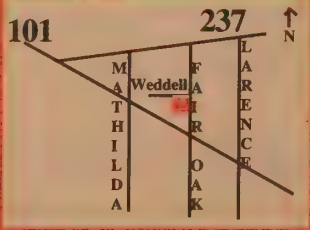
|                                                                              |     |
|------------------------------------------------------------------------------|-----|
| <b>BRITISH</b>                                                               |     |
| CD-ROM Bundle, Internal CD-ROM, Okey Dokey Audio Card & Mini Speaker.....    | 279 |
| <b>SONY</b>                                                                  |     |
| CD-ROM Bundle, Internal CD-ROM, Sound Blaster Pro Deluxe & Mini Speaker..... | 339 |
| <b>TEXEL</b>                                                                 |     |
| SCSI Internal CD-ROM.....                                                    | 358 |

## MOUSE & KEYBOARDS

|                                    |       |
|------------------------------------|-------|
| 3-Button Microsoft Compatible..... | 13    |
| Logitech Cordless/Trackman.....    | 88/71 |
| Logitech Mouseman Serial/Bus.....  | 58    |
| Logitech Scanman 256.....          | 248   |
| Microsoft Mouse *NEW*.....         | 59    |
| Focus FK8000/9000.....             | 49/59 |
| Chicony 5181/5161 Keyboard.....    | 36/46 |
| Maxiswitch keyboard.....           | 36    |

## MISCELLANEOUS

|                                  |         |
|----------------------------------|---------|
| Fax Modem 96/24.....             | 49      |
| Fax Modem 14.4/14.4.....         | 156     |
| Modem 2400.....                  | 29      |
| Tape Backup 120MB/250MB.....     | 149/189 |
| Archive CP9250 250MB w/Tape..... | 159     |
| Microsoft WIN3.1/DOS6.00.....    | 69/49   |



DATA

(408) 734-9386



# Power, Performance and to Buy Your Next System

**Best Deal System**

## Motherboard with CPU

- \* EISA VESA 486DX2-66 w/256K .....\$698
- \* EISA VESA 486DX-50 w/256K .....\$628
- \* EISA VESA 486DX2-50 w/256K .....\$578
- \* EISA VESA 486DX-33 w/256K .....\$498
- \* VESA Local Bus 486DX2-66 w/128K .....\$618
- \* VESA Local Bus 486DX-50 w/128K .....\$548
- \* VESA Local Bus 486DX2-50 w/128K .....\$498
- \* VESA Local Bus 486DX-33 w/128K .....\$418
- \* ISA 486DX2-66 w/128K .....\$598
- \* ISA 486DX-50 w/128K .....\$528
- \* ISA 486DX2-50 w/128K .....\$478
- \* AMD 486DX-40 w/128K .....\$418
- \* ISA 486DX-33 w/128K .....\$398
- \* ISA 486SX-25 w/64K .....\$188
- \* 386DX-40 w/64K .....\$138
- \* ORCHID VLB 486DX-33/66 .....\$448/668

## Best Deal System

- Motherboard w/CPU
- Cache As Indicated
- AMI BIOS
- 4 MB of RAM (70ns)
- Maxtor 130 MB IDE Hard Drive (15ms)
- TEAC 1.2 and 1.44 Floppy Drives
- SVGA Monitor (1024x768) .28dp
- OAK Technology SVGA Card w/512K
- IDE Controller (2HD/2FD)
- AT I/O Card (2S, 1P, 1G)
- Mini Tower Case w/200W Power Supply
- Mitsumi 101 Enhanced Keyboard

- \* EISA VESA LB 486DX2-66 w/256K .....\$1,538
- \* EISA VESA LB 486DX-50 w/256K .....\$1,458
- \* EISA VESA LB 486DX2-50 w/256K .....\$1,388
- \* EISA VESA LB 486DX-33 w/256K .....\$1,278
- \* VESA Local Bus 486DX2-66 w/128K .....\$1,458
- \* VESA Local Bus 486DX-50 w/128K .....\$1,378
- \* VESA Local Bus 486DX2-50 w/128K .....\$1,318
- \* VESA Local Bus 486DX-33 w/128K .....\$1,208
- \* ISA 486DX2-66 w/128K .....\$1,428
- \* ISA 486DX-50 w/128K .....\$1,348
- \* ISA 486DX2-50 w/128K .....\$1,288
- \* ISA AMD 486DX-40 w/128K .....\$1,258
- \* ISA 486DX-33 w/128K .....\$1,178
- \* ISA 486SX-25 w/64K .....\$998
- \* 386DX-40 w/64K .....\$928

# PRESTIGE

# COMPUTER

PRESTIGE COMPUTER

## Prestige Computer Inc.

408-249-3398 Fax: (408) 249-3392

3248 Stevens Creek Blvd., San Jose, CA 95117

Hours: Monday-Saturday 9:00am-7:00pm; Closed Sunday



# Price Aren't the Only Reasons from Prestige Computer

*Serving the Bay Area Since 1986*



## Special of the Month

- Intel CPU
- VESA Local Bus Motherboard
- 128K Cache
- AMI BIOS
- Genoa Vesa Local Bus SVGA Card w/ 1MB
- VESA Local Bus IDE Controller Card 2HD/2FD
- Maxtor 213MB IDE Hard Drive (13MS)
- TEAC 1.2 and TEAC 1.44 Floppy Drive
- 4MB of RAM (70ns) Expandable to 32 MB
- **SVGA Non-Interlaced Monitor (1024x768 .28DP)**
- Medium Tower Case w/230W Power Supply
- Mitsumi 101 Enhanced Keyboard
- AT I/O Card (2S, 1G) Ports
- MS DOS 5.0 or 6 Package
- **MS Windows 3.1 Package**
- 3 Button High Resolution Serial Mouse and Pad

**EISA VESA  
486DX-50MHz  
\$1899**

\*VLB 486DX-33MHz \$1538  
\*VLB 486DX-50MHz \$1698  
\*VLB 486DX2-66MHz \$1778

### VGA Cards

|                                   |       |
|-----------------------------------|-------|
| OAK 512K .....                    | \$38  |
| TRIDENT 1 MB .....                | \$56  |
| GENOA 1MB .....                   | \$89  |
| CIRRUS LOGIC 1MB VLB .....        | \$98  |
| DIAMOND S.STAR PRO .....          | \$128 |
| DIAMOND STEALTH .....             | \$138 |
| DIAMOND STEALTH 24 VLB .....      | \$148 |
| DIAMOND STEALTH PRO VLB 2MB ..... | \$378 |
| DIAMOND VIPER VLB 2MB .....       | \$389 |
| ATI ULTRA PLUS 2MB .....          | \$309 |
| ATI ULTRA PRO VLB 2MB .....       | \$333 |
| ORCHID FAHRENHEIT 1280+ .....     | \$148 |
| ORCHID FAHRENHEIT VA .....        | \$188 |
| ORCHID FAHRENHEIT VLB .....       | \$148 |
| ORCHID P9000 (3MB) VLB .....      | \$358 |
| VIDEO 7 WIN. 1MB .....            | \$80  |

### Monitors

|                                      |       |
|--------------------------------------|-------|
| MEGA IMAGE (1024X768 .28) IN .....   | \$248 |
| MEGA IMAGE (1204X768 .28) NI .....   | \$278 |
| IMPRESSION 3 (HITACHI TUBE) IN ..... | \$268 |
| SONY 1304S .25DP .....               | \$548 |

|                                       |        |
|---------------------------------------|--------|
| SONY 1430 (1280X1024 .25DP) NI .....  | \$588  |
| SONY 1604S 17" NI .....               | \$938  |
| VIEWSONIC 6E NI .....                 | \$323  |
| VIEWSONIC 15 (1280X1024 .28) NI ..... | \$558  |
| VIEWSONIC 17 (1280X1024 .28) NI ..... | \$1208 |
| VIEWSONIC 20 (1280X1024 .28) NI ..... | \$1698 |
| NEC 3FGe .....                        | \$608  |
| NEC 4FGe .....                        | \$728  |
| NEC 5FGe 17" .....                    | \$1095 |
| MAG MX15F .....                       | \$585  |
| MAG MX17F .....                       | \$1055 |

### Brand New Hard Drives

|                         |       |
|-------------------------|-------|
| 85 MB 18MS .....        | \$168 |
| 120 MB 18MS .....       | \$178 |
| 130 MB 15MS (MAX) ..... | \$188 |
| 170 MB 17MS .....       | \$199 |
| 212 MB 12MS .....       | \$213 |
| 213 MB 15MS (MAX) ..... | \$238 |
| 245 MB 15MS (MAX) ..... | \$258 |
| 340 MB 13MS (MAX) ..... | \$328 |
| 540 MB FAST (MAX) ..... | \$728 |
| 1.2 GB SCSI (MAX) ..... | \$998 |

### Modems & CD ROM

|                                        |       |
|----------------------------------------|-------|
| ZOLTRIX 2400 BAUD MODEM .....          | \$33  |
| ZOLTRIX 9600FAX/2400 MODEM .....       | \$68  |
| ZOLTRIX 14.4FAX/14.4 MODEM .....       | \$178 |
| U.S. ROBOTICS 14.4FAX/14.4 MODEM ..... | \$188 |
| SONY CD 31A .....                      | \$239 |
| SONY 541 (SCSI) .....                  | \$399 |
| TEXEL 3024 W/O CONT .....              | \$368 |
| CREATIVE LABS MULTI UPGRADE KIT .....  | \$558 |
| SOUNDBLASTER PRO DELUXE .....          | \$129 |
| SOUNDBLASTER 16 ASP .....              | \$209 |

### Miscellaneous

|                                     |        |
|-------------------------------------|--------|
| COLORADO 120 MB TAPE BACK-UP .....  | \$148  |
| COLORADO 250 MB TAPE BACK-UP .....  | \$178  |
| LOGITECH FIRST MOUSE .....          | \$48   |
| LOGITECH DEXA .....                 | \$23   |
| LOGITECH MOUSEMAN .....             | \$65   |
| LOGITECH TRACKMAN .....             | \$79   |
| LOGITECH SOUNDMAN 16 .....          | \$138  |
| MICROSOFT SERIAL MOUSE .....        | \$48   |
| PANASONIC & HP LASER PRINTERS ..... | \$BEST |

## Warranty

- 1 Year Parts/Labor
- Lifetime Phone Support
- 30 Days DOA Exchange

## Services

- Free On-Line Tech Services
- 72 Hours QA and QC Burn in
- Ship Within 48 hours (Unless specified)
- No surcharge for credit cards
- 3% Discount for cash purchase

## Quality

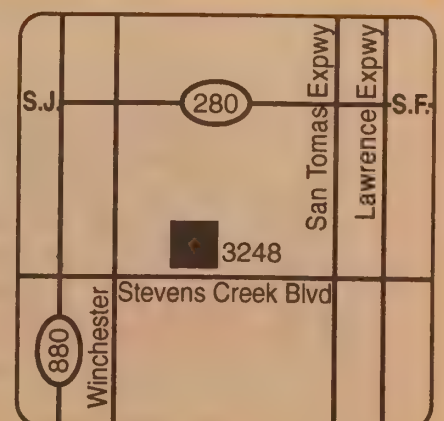
- Qualified Engineers
- Knowledgeable Staffs
- Reliable Parts (Tested) TEAC, Maxtor, NEC, Sony, ViewSonic OMNI, Orchid, Diamond, Genoa and Many More

## Guarantee

- Customer Satisfaction is our one and only goal!

## Terms:

- Freight charges are not refundable
- Damaged shipment is the carrier's responsibility
- Return items must have a RMA# -please call 408-249-3398
- All specifications & prices are subject to change w/o notice
- Dealer inquiries & government POs are welcome
- Credit terms are subject to approval
- Not Responsible For Typos





Whether your office has one computer or  
one hundred....

# We keep you working

→ **AUTHORIZED TECHNICAL SERVICES** has the experience *and* the expertise to handle your equipment service needs. Whether you're running one small office with one micro computer, or a statewide network of offices with a complex inventory of computers, video display terminals, printers and data communications devices—you simply cannot afford "down time". Call **ATS** today to find out just how easy it is to stay productive

  
**AUTHORIZED TECHNICAL SERVICES**  
**1-800-451-4057**

**HERE'S A PARTIAL LIST OF EQUIPMENT WE SERVICE:**  
**MICROCOMPUTERS:** Dell, Epson, Advance Logic (ALR), AT&T, Everex, Leading Edge, AST Research, Compaq, IBM. **LOCAL AREA NETWORKS:** 3Com, Novell. **STORAGE DEVICES:** Iomega (Bernoulli). **DOT MATRIX PRINTERS:** Alps, Datasouth, Epson, NEC, Panasonic, Citizen, Texas Instruments, C. Itoh, Digital Equipment (DEC), IBM, Okidata, Printek, Toshiba. **PLOTTERS:** Hewlett-Packard, IBM. **THERMAL PRINTERS:** IBM, Texas Instruments, Panasonic. **LINE PRINTERS:** Data Products, Printronix. **LETTER QUALITY PRINTERS:** C. Itoh, Diablo, NEC Spinwriters. **LASER PRINTERS:** Canon, Epson, IBM, AST, TI, Hewlett-Packard. **VIDEO DISPLAY TERMINALS:** Digital Equipment (DEC), Link, Qume, Tab, Televideo, Wyse. **DATA COMMUNICATIONS:** Hayes.

**ATS SERVICE CENTERS:**

**Los Angeles** (310) 839-0020  
**Orange County** (714) 937-0332  
**Oakland** (510) 638-4449  
**Sacramento** (916) 923-2944  
**San Jose** (408) 970-9860



# MultiMedia & beyond

continued from page 306

palette, basically because these are the elements which you're using to paint your artitorial. This concept palette is basically a window, and behind it is all the workings of the object thesaurus in which you have tagged your own meaning about each of those elements. You can manipulate that concept palette to represent how you see that event."

## WHERE'S THE MARKET?

Mehlman foresees artitorialists fulfilling the function of columnists in the editorial section rather than straight reporters on the front page. Individuals would be able to access artitorials through that much-posit-ed com-munica-tions system of

the future, Netvision (NV). Mehlman sees its physical manifestation as "an appliance in everybody's home, five to ten years from now, that will be a computer, telephone,

any reporter, in print, radio, or video, gathers material,

television, and fax machine." It'll be interactive in that you will be able to control your programming by having random access to anything on NV, and you'll also be able to branch within the specific choices of your particular program. Of course, it'll also be interactive in that

you'll be able to communicate with other individuals and upload your creative offerings for their perusal.

Mehlman's concept of a finished artitorial is that in a sense it is never finished. An initial stage might consist of "a necklace of maybe ten visual short stories" about an event, perhaps from one artitorialist, perhaps from several. The viewer or user could "go through it at many different levels. You could go through it and just listen to the artitorialist's point of view, but that would be surrounded by a database of raw footage, of interviews, of text. There would be deeper connections to articles in libraries—online libraries, books, all sorts of things—so that the viewer can research on a lot of different levels. My hope is that the viewer would

have the opportunity to create their own artitorials in turn, so that they would be able to learn by participating and also have a dialog with the artitorialists or a dialog with other viewers who read that column."

## SCIENCE FICTION OR JUST THE FUTURE?

Mehlman's vision has evolved over ten years. Many of the details of artitorials seem farfetched; some features were barely thought of, even in science fiction, ten years ago. However, some are now considered to be just around the corner—if not already here.

One of the strongest driving forces

The supposed objectivity of the press is a sham—basically,

behind multimedia is the common human desire to make manifest the contents of one's mind. Closely associated is the belief that multimedia will provide

better ways to tell stories. True, many of the tools are currently either nonexistent or overhyped, but the inspiration remains, and the artitorial concept draws

researches background, and organizes and prioritizes the

strength from it.

Further, artitorials parallel work going on in other areas. The work of the Reality Lab of Digital Media (as mentioned in last

story with some degree of personal or corporate influence.

issue's column) is clearly very similar, although oriented more toward entertainment than providing information, and lacking the detailed systematic theory that Mehlman has woven around artitorials. Several research avenues in the world of virtual reality have relevance to artitorials, particularly work on navigating large databases and teaching systems to respond and improvise with human partners. (See the passages on "The Visual Perception Laboratory at NTT," pages 251-255, and "From Neuro-Drummers to First-Person Fantasies," pages 294-299,

Howard Rheingold's *Virtual Reality* for further information.)

In Neal Stephenson's *Snow Crash*, gargoyles are immediately reminiscent of artitorialists, although certainly not identical in detail or function. Lastly, artitorials have much in common with Ted Nelson's Xanadu proposals. Mehlman readily agrees that "I share a lot of things with Ted's ideas," adding: "I think there's a lot of ground that needs to be covered before we can get to anything that's like Ted's or my ideas in terms of copyright laws and publishing paradigms and ownership, the way that we see knowledge. Ted has proposed a much freer way of thinking about information. Sharing it is vital."

There are serious short-term difficulties at the technical end. In the case of the SFSU Artitorials class, besides classroom discussion, there were two field trips when members of the class attempted to put a simple version of artitorials into effect. The results pleased Mehlman at a conceptual level, convincing her that her approach is workable.

However, on a practical level, artitorials are at the beyond-the-bleeding-edge stage. Until Mehlman's software is further along, much of the proof of the concept will be lacking, because the

manipulation of the object thesaurus by either artitorialist or user is not viable with current database design.

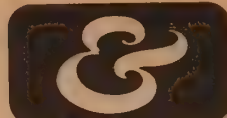
Shooting digital video on the streets is not an easy thing to do. I witnessed

mass frustration with technical incompatibilities between software and video compression boards. Generally, desktop technology is stretched beyond comfort when the requirements are this demanding.

That "necklace of video haiku poems" was never made. However, the students generally seemed to feel that the experience of the class was worthwhile. And, despite some well-founded cynicism, I buy a large part of Mehlman's vision and have a hankering to make some artitorials myself. ■



# MultiMedia beyond



Continued from page 300

hand). A nonlinear digital editing system could also be designed around VLab.

Bottom line: The ability to affordably capture video at 30fps is going to open whole new worlds to desktop video.

## THE VLAB-RETINA TEAM

When the VLab is teamed with MacroSystemUS's Retina display card, its features are enhanced. The video source can be monitored on a Retina display in 16-bit color. There is a noticeable delay in the display update, but it does give you a better idea of what will ultimately be captured.

Also, Retina comes with a program called Makerace that will compile the captured images with sound into an animation playable on the Retina. With a VGA video encoder, it should be a fairly simple operation to get the Retina output to videotape. On my Amiga 3000, I was able to play a 320 x 200 animation with sound

using a 16-bit display at about 15fps. For even faster playback, read on!

## A MATCH MADE IN HEAVEN

MovieMaker (\$895 list) from Interactive Video Systems is a nonlinear digital video and audio editing system that comes with its own 16-bit stereo sound card.

MovieMaker provides a way to arrange and play VLab-captured frames full-screen at 30fps, with 16-bit sound to boot! MovieMaker works very nicely in an Amiga 3000 and should work better in an Amiga 4000, if it has a Zorro III SCSI controller (currently a rare species). MovieMaker operates best with certain hard drive models so IVS also offers it bundled with an approved hard drive.

Using VLab's IFR, I captured several seconds of video. I also digitized the audio using AES, the audio software that comes with MovieMaker. Then using ADPro, I converted the captured YUV images to

DCTV format. Incidentally, ASDG's product ProControl, a front-end for ADPro, made this a very easy task and saved me the trouble of writing my own ARExx script.

Next I imported the DCTV files into the MovieMaker hard disk partition. (MovieMaker requires its own partition.) It took a couple of tries to get the audio synced properly, but the resulting playback was incredible!

Using MovieMaker's word processor-like editing functions, I was able to manipulate my captured video in nearly unlimited fashion. Max Headroom stutter effects were easy as pie to do. This VLab-MovieMaker-DCTV setup seems like a natural for doing MTV-style music videos.

Although MovieMaker's output is not broadcast-quality, it is more than adequate for home and industrial use. MovieMaker would also be valuable in a professional preproduction environment. Quick-rendered 3-D animations could be edited and tested with an audio track before being

Continued on page 244



## BAR CODE IS OUR SPECIALTY

### INPUT AUTOMATION, INC.

The single source for all your bar code system needs: hardware, software, consulting and system design. Our philosophy is based on two principles: high-quality industrial products, and the best technical support available.

### DESIGN AND CONSULTING

To create your optimal solution, an Input Automation consultant will design a complete system, and then recommend equipment that fills your exact needs.



We will not be satisfied until our bar code system meets your demanding standards.

**Call today for free  
info. & product  
information**

(Dealer inquiries welcome)

**Call for an appointment  
to see our Showroom**

**Southern California**

**Tel: (310) 539-3598**

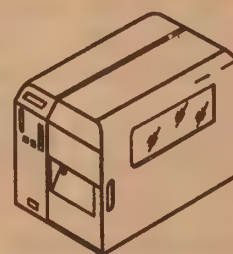
**Fax: (310) 530-2849**

**Tel: (714) 374-4511**

**Northern California**

**Tel: (510) 685-6563**

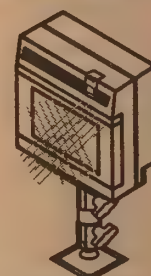
**Fax: (510) 685-2513**



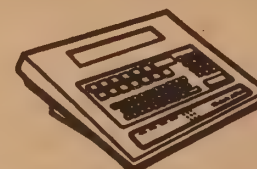
**Bar Code Label  
Printers, Software,  
and Supplies**



**Laser Scanners.  
Omnidirectional, hand-  
held/hands-free, fixed mount.**



**Panasonic Portables.  
Recognized the world  
over for quality**



**Welch Allyn bar code  
readers/scanners. Over 15  
years leadership in bar code  
manufacturing.**



©1992 Copyright Input Automation, Inc. All rights reserved. All product names mentioned are trademarks of their respective manufacturers. Input Automation, Inc. recognizes these trademarks.



# NAC Knows NETWORKS!

## Network Adapters

### Addtron Ethernet Combo... \$85

- BNC, 10 Base T
- Five-year Warranty

### Addtron Ethernet Xcvr..... \$49

- Thick to Thin or 10Base T

### Addtron POCKET size Ethernet..... \$185

### Xircom POCKET E-net Combo..... \$330

### Xircom PCMCIA Ethernet..... \$290

### Xircom PCMCIA E-net Combo..... \$315

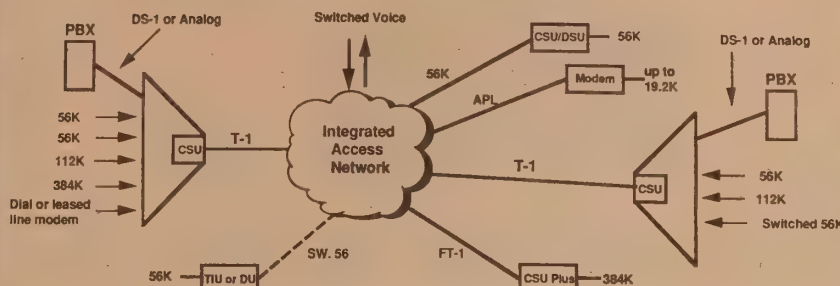
### T.C. Token Ring Combo..... \$369

- 16/4 mps, DB9 and Twisted Pair
- Three-year Warranty

### Accton POCKET Token Ring 16/4.. \$440

### T.C. PCMCIA Token Ring 16/4..... \$615

Single Vendor Solution



## \$\$\$We Save You Money\$\$\$



NetWare 4.0, 25 User .....\$3,275

NetWare 3.11, 20 User .....\$1,765

## UNIX for PCs

FTP (B) ..... \$427  
SUN-PC/NFS (B)..... \$447  
TCP Kernel..... \$90  
Hummingbird eXceed/W.....\$411  
XVision.....\$364

## UNIX for MACs

TCP/IP (B) .....\$395  
NFS (B).....\$395  
TCP/IP + NFS (B).....\$615  
Apple MacX.....\$280  
(B) Price includes Ethernet Card & SW

## NW Cards & Equipment

3COM Etherlink III Coax.....\$145  
3COM Etherlink III TP.....\$145  
SMC Ethercard Ultra 16 Coax.....\$119  
SMC Ethercard Ultra 16 TP.....\$119  
Asante Ethernet Card.....\$154  
Dayna Etherprint.....\$380  
Intel NetPort II.....\$449  
Arcnet Kit w/AI or NW Lite.....\$262  
Ether Kit w/AI or NW Lite.....\$295  
1000' Cable.....\$200  
AMP BNC Male Conn (10-P).....\$30  
15' or 25' assembled cable.....\$20  
IBM T.R. Patch Cable 8'.....\$18  
Transceiver Cable 3'.....\$25  
10Base T 9-Port Hub.....\$285  
10Base T 18-Port Hub.....\$565  
2-Port Ethernet Repeater.....\$399  
4-Port Ethernet Repeater.....\$599  
8mm Tape Drive.....\$1669  
4mm DAT 2G Tape Drive.....\$1189

## COMPAQ File Server

### You need a real file server!

A personal computer steroidal with a large chassis, big drives, rich memory, and multiple cards is still a "personal" computer. To be used as a network file server, it can function but hardly produce. Architectures are different. Compaq has the real server, so you know, but you also doubt if it's for you...

### Think you can't afford a Compaq server?

Think again.

- 486/33 EISA, 24M
- Compaq Fast SCSI-2 host adapter
- Compaq Netflex 32-bit EISA NIC
- 3-year on-site service for the above items
- 1G SCSI-2 hard disk (12ms)
- VGA monochrome monitor
- Fully installed with NetWare and tested

**\$5,685**

## WE EASE YOUR CONNECTIVITY

| PLATFORM                                                                         | PROTOCOL                                                               | TRANSMISSION                                                                |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| PC/DOS WINDOWS<br>MACINTOSH<br>IBM RS6000<br>DEC VAX<br>DEC RISC<br>SPARC SUN-OS | NETWARE/IPX<br>TCP/IP<br>NFS<br>X-WINDOW<br>DEC PATHWORKS<br>APPLETALK | TOKEN RING<br>FDDI<br>T1/FT1/Switched 56K<br>FRAME RELAY<br>ISDN<br>DIAL-UP |

NAC is authorized by the following system vendors:  
IBM RS6000, DEC VAX/RISC, AXIL, COMPAQ, HP, APPLE

## YOU NEED STRONG HANDS

....Not finger pointing

- Enterprise Network Design
- Cabling System Design
- System Administration
- System Management
- Equipment Installation
- Application Installation
- Cable Installation
- System Administration Training
- Application Software Training
- Network System Trouble-Shooting
- On-Site Hardware Trouble-Shooting
- Telephone Support
- Maintenance Contract
- Carry-In Hardware Repair



NAC Engineering & Service Department is composed of veterans in UNIX, Windows, Macintosh, WAN, and a group of CNEs.

LANtastic  
ARTISOFT INC.

DAVID SYSTEM

NOVELL

digital™

Microsoft



WOLLONGONG

HEWLETT  
PACKARD  
Authorized Dealer

intel



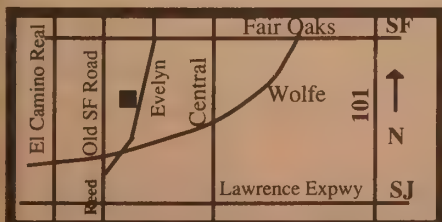
Authorized Dealer

FTP

SMC

SCO  
THE SANTA CRUZ CORPORATION

3Com



## Network Associates Corporation

(408) 733-2600 ext 333

FAX (408) 733-4268

720 E. Evelyn Ave., Sunnyvale, CA 94086-6526

Not responsible for typographic errors. Subject to stock on hand. Prices subject to change.



# NOWMedia Multimedia & Entertainment

## FamilyMate

The Ultimate Home PC

- Intel i80486DX/33Mhz
- 4MB RAM, 256K Cache
- 170MB IDE Hard Drive 13ms
- 1.2 and 1.44MB Floppy Drives
- 14" SVGA .28dp Monitor
- Local Bus SVGA Card 1MB
- Medium-tower Case 230W PS
- 101 Enhanced Keyboard
- Logitech Mouse
- Sound Commander Gold Card
- Sony CD-ROM Drive
- Two Stereo Dynamic Speakers
- Dynamic Microphone
- 5 CD-ROM Titles: Encyclopedia by Toolworks, Nautilus Best of MIDI, Macromind Action, Multimedia World Atlas and Sherlock Holmes

**\$1795**

## Local Bus - MultiMedia



**Pentium  
OverDrive  
Ready**

## PowerMedia

- Intel i80486DX2/66Mhz
- 8MB RAM, 256K Cache
- 340MB IDE Hard Drive 13ms
- 1.2 and 1.44MB Floppy Drives
- 15" ADI 4G .28dp Flat Monitor
- Stealth 24 VLB Card 1MB
- Local Bus IDE Controller
- Medium-tower Case 230W PS
- 101 Enhanced Keyboard
- Logitech Mouse
- Sound Blaster 16 ASP Card
- Toshiba 3401B 200ms CD-ROM
- Labtec 550 Amplified Speakers
- Dynamic Microphone
- 5 CD-ROM Titles: Compton's Encyclopedia, Microsoft Bookshelf, MicroSoft Works, Multimedia World Atlas and Animals

**\$2995**

**Buy one of the above OR upgrade any of our systems with the following Media Kits:**

### CREATIVE

#### Edutainment 16/8 \$479/439

- Sound Blaster 16/Pro
- Panasonic CD-ROM
- Two Speakers
- Eight CD Titles: MultiMedia Encyclopedia, Animals, San Diego Deluxe, Just Grandma & Me, Sherlock Holmes, Monkey Island, Secret Weapons and Loom

#### Discovery 16/8 \$439/379

- Sound Blaster 16/Pro
- Panasonic CD-ROM
- Two Speakers
- Three CD Titles: MultiMedia Encyclopedia, Animals, and Lemmings

### MEDIA VISION

#### Fusion 16/Double 16 \$469/579

- Pro Audio Spectrum 16
- SONY/NEC CDR-84-1 CD-ROM
- Labtec Speakers
- Five CD Titles: Compton's Encyclopedia, Carmen San Diego, Civilization, Battle Chess, Mania

#### NOW's BusinessMedia Kit

- Sound Blaster 16 ASP \$1350
- Toshiba 3401B CD ROM 200ms
- Labtec Speakers
- Five CD Titles & Software: MS Office for Windows (MS Word, Excel, Power Point), MS Bookshelf Library, Compton's Encyclopedia, Animals and World Atlas

# NOWNet Networking

**Finally, a Peer-to-peer Network that MAKES SENSE!!**

The Easiest, Fastest and Most Economical Way to Network Your Office

**Introducing Microsoft Windows for Workgroups with NOWNet Packages**

### NOWNet Package 1 The Economical Pack

#### Workstations:

386DX/40Mhz, 128K Cache, 4MB RAM, 80MB IDE HD, 1.2 or 1.44MB FD, 14" SVGA Monitor, SVGA Video Card, Mini-tower Case, 101 Keyboard, IDE Controller, Logitech Mouse, Network Kit\*

**\$1195 each**

#### Loaded station:

486DX/33Mhz, 256K Cache, 8MB RAM, 130MB IDE HD, 1.2 and 1.44MB FD, 14" SVGA .28dp Monitor, SVGA Video Card w/1MB, Mid-tower Case, 101 Keyboard, IDE Controller, Logitech Mouse, 120MB Tape Back-up, 96/24 Fax/Modem, Mitsumi CD ROM Drive, Network Kit\*

**\$2295**

### NOWNet Package 2 The Performance Pack

#### Workstations:

486DX/33Mhz, 256K Cache, 8MB RAM, 212MB IDE HD, 1.2 and 1.44MB FD, 14" SVGA .28dp Monitor, Local Bus Video w/1MB, Mini-tower Case, 101 Keyboard, IDE Controller, Logitech Mouse, Network Kit\*

**\$1895 each**

#### Loaded station:

486DX2/66Mhz, 256K Cache, 16MB RAM, 340MB IDE HD, 1.2 and 1.44MB FD, 15" SVGA .28dp Monitor, Stealth 24 VLB Video, Full-tower Case 250W, 101 Keyboard, VLB IDE Controller, Logitech Mouse, 250MB Tape Back-up, 14.4K Fax/Modem, Toshiba 3401B CD ROM Drive, Network Kit\*

**\$3696**

#### The Windows For WorkGroups Advantages:

- Most Economical Network Available
- No Need for a Dedicated File Server
- No Need for a Network Administrator
- Option of Daisy Chaining or Hub Set-up
- Easy Sharing of Peripherals and Devices
- Built-in E-Mail and Scheduling Features
- GUI (Graphical User Interface) File Sharing
- OLE (Object Linking and Embedding) Capabilities
- Easy Connection to Apple, Novell and DOS Machines
- Extremely Easy to Install and Operate

#### \*Network Kit Includes:

- MS Windows for WorkGroups 3.1 • MS DOS 6.0 w/Manuals • MS Windows 3.1 w/Manuals • MS E-Mail and MS-Scheduler+ • 16-bit Network Card TP/Coax • Diskettes, Cables and Manuals • Complete Installation and Set-up

# NOWServ

## The Purchasing Source for VAR's

If you're a VAR or Reseller and you're looking for a supplier who understands value and service, look no further than NOW Electronics. There's no better way to attract so many loyal, repeat customers.

### Here's what you get when you join NOWSERV...

- A dedicated sales representative.
- Prompt delivery of systems & components; often hours after ordering.
- Immediate exchange on RMA items; no questions asked.
- Flexible payment and special financing options available.\*

\* Subject to prior credit approval

#### Quotes from our VAR customers

"Integrity, professional courtesy, up-to-date R&D, competitive pricing, made dealing with NOW a smooth experience. Finally a VAR's best friend."

Ron Sen - SF VAR

"If you are looking for a company that offers a high level of service, operates with integrity, has reliable products along with excellent technical support, then give NOW a call."

Douglas Olds - ACE Computer Consultant

"NOW - The best Quality, reliability, and after sale support I've experienced". "NOW - A pleasant buying experience from order to delivery". "NOW - A company that understands my marketplace and supports me completely"

Tony Olszewski - Office Products Today

San Jose  
TEL: 408/894-7060

**NOW Electronics, Inc.**

San Mateo  
TEL: 415/345-4577



# Are You Suffering From Computer Anxiety?



- Should I buy ISA, EISA or VESA?
- Which is better... IDE, SCSI or an ESDI Hard Drive?
- Has the true 50 MHz VESA Local Bus been standardized yet? Is it safe to buy?
- What the heck is "Bus Mastering"? Does my system support it?
- Do all hard drives support the Local Bus?
- Is the P24T OverDrive the same as the Pentium?

**WHO CAN HELP ???**

Call **777** before you get to an advanced stage where there is no going back.

## DID YOU KNOW THAT...

- VESA (VL-BUS) is faster than ISA or EISA.
- True 50MHz on VESA is NOT recommended.
- A buffered VESA slot will prevent CPU from overloading and guarantees reliable operation.
- A system can not be called "Local Bus" unless the video card and/or the HD controller are inserted on a local bus slot with 32-bit interface.

**FREE NAV**  
with your next system from NOW.  
You'll get a  
**\$50 value**  
Norton-Anti Virus absolutely  
**FREE.**

## Genesis

A well built system for those who are seeking brand-name quality components and the latest in technology at a low price. Ideal for home use, office work and Multimedia.

**Micronics or AMI SuperVoyager**

ISA and VL-BUS  
Intel 66MHz 486DX2 CPU



BYTE MAGAZINE  
EDITOR'S CHOICE  
Seagate 3390A

Pentium  
OverDrive Ready

**\$2695**

## Warrior

If you are looking for reliability, speed and performance, then you are in with a Warrior.

Built to meet the needs of CAD designers, Software developers and Desktop Publishers.

**Micronics or AMI Enterprise III**

EISA • VL-BUS • SCSI-2  
Intel 66MHz 486DX2 CPU



Pentium  
OverDrive Ready

**\$4395**

## Crusader

The Crusader is an EISA-based machine made for the EISA "diehards". When your application does not need or "like" the VL-Bus, the Crusader is your savior. Ideal as a File Server, Unix/Windows NT and NextStep Workstation.

**Micronics EISA E3**

EISA • SCSI-2 • 512K Cache  
Intel 66MHz 486DX2 CPU

Pentium  
OverDrive Ready

**\$4495**



**ASUS**

- VESA Local Bus Motherboard
- 66MHz Intel 486DX2 CPU
- 256K 20ns Cache
- 8MB RAM up to 64MB
- 250MB Western Digital Hard Drive 13ms
- 1.2 and 1.44MB TEAC Floppy Drives
- 15" ADI 4G .28dp NI Flat Monitor
- 32-bit Stealth 24 VLB 1MB VRAM or Orchid Fah. 1280 VLB 1MB
- 32-bit IDE VLB Controller
- Medium Tower Case 230W PS
- 101 Keytronic Keyboard
- 2 Ser, 1 Par and 1 Game Ports
- Built-in Math Co-processor
- CPU Heat Sink and Fan

### MOTHERBOARD OPTIONS:

Diamond FastBus VLB..... \$2195  
ORCHID Superboard VLB..... \$2150  
ASUS Pentium Ready..... \$2095  
Genoa TurboExpress VLB..... \$2075



**ASUS**

- VESA Local Bus Motherboard
- 33MHz Intel 486DX CPU
- 256K 20ns Cache
- 4MB RAM up to 64MB
- 170MB Western Digital HD 12ms
- 1.2 and 1.44MB TEAC Floppy Drives
- 14" AcerView 34T .28dp NI Monitor
- 32-bit Genoa 8500 VLB or ET4000 VLBController
- 32-bit IDE VLB Controller
- Mini Tower Case 200W PS
- 101 Enhanced Keyboard
- 2 Ser, 1 Par and 1 Game Ports
- Built-in Math Co-processor

### MOTHERBOARD OPTIONS:

Diamond FastBus VLB..... \$1495  
ORCHID Superboard VLB..... \$1450  
ASUS Pentium Ready..... \$1395  
Genoa TurboExpress VLB..... \$1375

## NEW!

Get the performance of 66Mhz at the cost of 33Mhz!  
Introducing IBM's new "Green"  
**486SLC2-66Mhz Processor**  
Local Bus System  
Made in the USA by IBM

- alaris Local Bus Motherboard
- 66Mhz IBM 486SLC2 CPU
- 16K Internal CPU Cache
- 128K Motherboard Cache
- 4MB 70ns RAM
- 250MB Western Digital HD 13ms
- 1.2 & 1.44 TEAC Floppy Drives
- 14" AcerView .28dp NI Monitor
- 32-bit Tamahawk Cirrus Logic or Genoa 3500 VLB Video Card
- 32-bit IDE VLB Patriot I Controller
- Mini Tower Case 200W PS
- 101 Enhanced Keyboard
- 2 Ser, 1 Par & 1 Game Ports
- Low Power Consumption
- Energy Star Compliant

Special Offer for Only

**\$1455**

Intel 486DX2/66MHz CPU... \$1450  
Intel 486DX/50MHz CPU..... \$1375  
Intel 486DX2/50MHz CPU... \$1295  
Intel 486DX/33MHz CPU..... \$1195  
Intel 486SX/33MHz CPU..... \$1075  
Cyrilx 486DLC/40MHz CPU... \$1050  
Cyrilx 486DLC/33MHz CPU..... \$995  
AMD 386DX/40MHz CPU..... \$955  
Intel 386DX/33MHz CPU..... \$955

- ISA Motherboard and CPU
- 64K 20ns Cache
- 4MB RAM up to 32MB
- 130MB Maxtor IDE HD 15ms
- 1.2 and 1.44MB TEAC Floppy Drives
- 14" SVGA .28dp Monitor
- SVGA 1MB RAM Video Card
- Mini Tower Case 200W PS
- 101 Enhanced Keyboard
- 2HD/2FD IDE Controller
- 2 Ser, 1 Par and 1 Game Ports
- Built-in Math Co-processor

Please call for upgrades

## OPTIONS & UPGRADES

### Hard Drives

- 105MB.....Call
- 130MB.....Call
- 170MB.....Call
- 210MB.....Call
- 250MB.....Call
- 340MB.....Call
- 335MB.....Call
- 335MB Plus.....Call

### Monitor/Video

NEC, Sony, Nanao, MAG, ViewSonic, ATI, Diamond, Genoa, Orchid, etc.....Call

### Fax/Modem

- 2400 Modem.....Call
- 96/24 Fax/Modem.....Call
- 96/96 Fax/Modem.....Call
- 14.4/14.4 Fax Modem.....Call
- Intel Satisfaction 400.....Call

### National Fax/Modem/Voice/Mail

.....Call

### Storage Devices

- 120/250MB Tape Back-up.....Call
- 120/250MB Tracker Parallel.....Call
- 21MB Floptical Drive w/Kit.....Call
- 2.88MB Floppy Drive.....Call

### Internal CD-ROM

- Mitsumi 350ms w/Card.....Call
- SONY 31A 490ms w/Card.....Call
- SONY 541 380ms w/Card.....Call
- Texel 3024 265ms.....Call
- NEC CDR-84 280ms.....Call
- Toshiba XM-3401B 200ms.....Call
- MultiMedia
- MediaVision Fusion CD 16 Kit.....Call
- Creative Labs Upgrade Kit.....Call
- Pro AudioSpectrum 16bit.....Call

- Sound Blaster Pro Basic.....Call
- Sound Blaster Pro 16bit.....Call
- Video Blaster (TV in PC).....Call

### Pointing Devices

- 3-button Mouse.....Call
- Logitech 1st Mouse.....Call
- Logitech Mouseman.....Call
- Logitech Trackman.....Call
- SummaSketch III 4 Button.....Call
- MS DOS 5.0.....Call
- Windows 3.1.....Call

## GUARANTEES:

1. 1 Year Parts & Lifetime Labor
2. 72 Hour Burn-In and Quality Check
3. Original Brand New Parts and Manuals
4. 100% IBM, NOVELL Compatibility
5. Life-time Technical Support and Advice
6. Prompt Courteous Sales & Tech Staff

## PARTIAL LIST OF OUR CORPORATE AND GOV'T. CUSTOMERS:

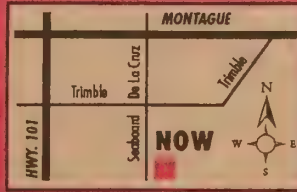
Federal Govt, Lockheed Space and Missile, State of California, Federal Express, Metropolitan Insurance, Adaptec, Cal-Trans, Nat'l Semiconductors, AT&T, UC Berkeley, Lawrence Livermore Labs, Continuum Lasers, and many more.  
(Contacts and Phone #'s are available upon request).

**CALL FOR PRINTERS & SOFTWARE**



**San Mateo**  
TEL: 415/345-4577

Hours: M-F 9-6:00 Sat. 11-6  
FAX: 415/345-4576  
2031 Pioneer Court Ste. 2  
San Mateo, CA 94403



**San Jose**  
TEL: 408/894-7060

FAX: 408/894-7062  
2526 Seaboard Ave.  
San Jose, CA 95131

Hours: M-Th. 9-7:00 Fri. 9-6 Sat. 11-6

Cash Prices \*Prices are subject to change without notice. Not responsible for typographical errors.



# We Buy Excess Inventory! OEM & Dealers Only

**WE BUY EVERYTHING, SOFTWARE, PC & MAC  
HARDWARE, TERMINALS, IC'S, ETC.**

**"THE BIGGER THE QUANTITY THE BETTER!"**

**CALL OR FAX YOUR LIST  
WE WILL RESPOND IMMEDIATELY**

## SOFTWARE BLOWOUT

|                                      |      |
|--------------------------------------|------|
| MAC DRAFT (MAC) .....                | \$25 |
| MICROSOFT WORD 5.0 (MAC) .....       | 75   |
| MICROSOFT EXCEL 4.0 (MAC) .....      | 99   |
| MICROSOFT EXCEL 4.0 WINDOWS .....    | 120  |
| LOTUS 1-2-3 FOR WINDOWS 1.1 .....    | 45   |
| LOTUS AMI-PRO 2.0 .....              | 45   |
| NORTON DESKTOP 2.2 FOR WINDOWS ..... | 90   |
| SUPERSTORE 2.0 .....                 | 15   |
| WORDPERFECT 5.2 WINDOWS .....        | 250  |
| AMISH UTILITIES FOR WINDOWS .....    | 15   |

## Strata Remarketing

**(510) 656-9848**

**FAX (510) 656-9891**

46560 Fremont Blvd. #302 Fremont, CA 94538

## MONITOR REPAIRS

**\$55** Monitor Repairs plus parts **\$40** Monitor Alignment & Adjustment

## NEW SYSTEMS AND MAINTENANCE SERVICES

### BACKYARD COMPUTER SERVICES

Over 10 years experience

**(510) 689-3733**

1842 Colfax St. Concord CA 94520

Free Parking in Rear

## Kodak Photo CD™

### ON SITE TRANSFERS

Five levels of resolution per scan from thumbnail to 2K x 3K pixels.  
100 image packs per disc.

### SPECIALISTS IN IMAGE DATABASE/PHOTO ARCHIVING SERVICES

Rapid retrieval of stored slides and negatives. Avoid wasteful and expensive duplication.

### IMAGE AND TEXT DATA TRANSFERS TO CD-ROM

Free up Syquests (10 44MB cartridges per CD-ROM), hard disc, Exabyte, DAT tapes and other media. Windows, DOS and MAC. ISO 9660 and HFS formats.



### ALPHA CD IMAGING

640 Menlo Avenue, Suite 4

Menlo Park, CA 94025-4700

Call: 1-800-453-2988 or 415-325-4877

Fax: 415-325-4911

# MultiMedia & beyond

*Continued from page 240*

rendered in broadcast-quality form. Also, storyboarding would be a breeze with MovieMaker using either static or animated sequences.

MovieMaker needs about 100MB per minute of playback. I would estimate that for serious work, you'll need at least a 1GB hard drive. Remember, the original source files have to also exist before they are transferred to the MovieMaker partition. Fortunately, 1GB drives have become somewhat affordable lately. Note that MovieMaker does not require you to dedicate the entire drive, it only needs a partition.

## THAT'S A WRAP

At current street prices, a VLab-AirLink-MovieMaker-DCTV package will cost you around \$1500. If you need a hard drive, you'll have to add that into the cost too. This may sound expensive, but I am not aware of anything on any computer platform that will match the performance and flexibility of this set up—at least in this price range.

## AIRLINK

I just couldn't end this article without mentioning a little bit more about AirLink. By itself, this is an awesome device. It acts as a programmable universal IR remote. All you do is draw a picture of your remote using any paint program (you only need to include the functions you will use). Then you point your remote at the AirLink device, which plugs into the joystick port, and record the IR signals

Although MovieMaker's output is not broadcast-quality, it is more than adequate for home and industrial use. MovieMaker would also be valuable in a professional preproduction environment. Quick-rendered 3-D animations could be edited and tested with an audio track before being rendered in broadcast-quality form.

one at a time. Each recorded signal can be associated with any button in your picture. The AirLink's IR LED can be triggered by your mouse, ARexx, user-defined hot keys, serial and parallel port data, and MIDI events.

With AirLink, all IR-remote-controlled devices—laserdiscs, TVs, VCRs, stereos, CD players, etc.—can be at your beck and call. You will no longer be limited to controlling only those devices that have serial port access. AirLink is perfect for multimedia presentations.

You can even trigger other events beside IR, including sending data out the MIDI, serial and parallel ports, executing ARexx commands, emulating keystrokes and mouse clicks, and executing programs. It is also possible to add eight additional IR LEDs using an adapter connected to the parallel port! An upcoming version of the software will allow you to open an AirLink control window on any public screen. With this, you can control your VCR and be doing VLab operations, all from the same screen! ■



# California Resellers:

Make the most of your peak selling season with the 1993 MicroTimes  
Computer and Software Buyers Guide, cover date December 14th!

## Take Advantage of this FREE Editorial Listing!

By making sure you're listed in this year-round resource you will:

- Bring customers into your store during your most important selling season. They'll see your message next to an exciting lineup of editorial features, including our writers' picks for the best hardware and software products of 1993. Over 30 pages of Buyers Guide announcing new products and special offers— many of which you'll already have in stock, ready to sell!
- Showcase your store, products, and services by telling your potential customers about the unique service your business offers. Your in-house experts and the guidance they provide in such areas as LANs, multimedia, accounting and other specialties.

### Special Vendor-

### Authorized Listings!

In addition to listing your store's name and other information alphabetically by geographical area, this year we're offering an additional feature to enable your prospective customers to find you quickly: a separate directory of vendor-authorized sales, service, training, and support providers. So if you're authorized to provide these services for Novell, IBM, Apple, Sun, Hewlett-Packard, or other name-brand products, please give us that information so we can include your name in the vendor-authorized listings.

To make sure you're part of this important resource, complete and sign the attached Reseller Poll form and mail or fax it back to us by Oct. 1, 1993. **If your store has more than one location, please use a separate form for each location** to generate the sales that will make your fourth quarter a success. Don't let this opportunity pass you by!

**For advertising information, call (510)934-3700 or (213)851-8600.**

# MICROTIMES 1993

## Computer and Software Buyers' Guide Reseller Poll

Mail To: Reseller Poll, 3470 Buskirk Ave., Pleasant Hill, CA. 94523

Fax: (510)934-7351

Deadline: October 1, 1993

Store Name: \_\_\_\_\_

Store Manager: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

What software applications does your business specialize in, and who are your in-house experts for each specialty? (List up to three):

Specialty

Expert

What operating systems does your business support?

MS-DOS\_\_ AmigaDOS\_\_ Windows\_\_ Windows NT\_\_ UNIX (specify variety)\_\_\_\_\_  
OS/2\_\_ Macintosh\_\_ Other (specify)\_\_\_\_\_

List the three top-selling brands sold at your store 1993:

What special value-added services (e.g. service, training, support, warranties, return policy, etc.) does your business offer? (Please keep responses under 25 words or we will edit them to fit available space.)

Are you a vendor-authorized sales, service, training and/or support source?

If so, please list up to five vendors (e.g. Sun, Novell, Hewlett-Packard, Autodesk) who have authorized your business to provide these services, and check the areas for which you're authorized.

| Vendor | Sales | Service | Training | Support |
|--------|-------|---------|----------|---------|
| _____  |       |         |          |         |
| _____  |       |         |          |         |
| _____  |       |         |          |         |
| _____  |       |         |          |         |

I certify that all the statements made in this survey are true.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# CENTRAL

COMPUTER SYSTEMS, INC.

WIDE SELECTION AT LOW PRICES

Since 1986

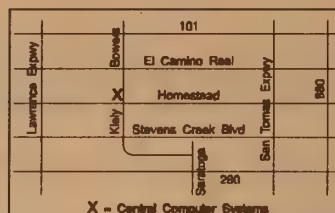
TEL: (408) 241-0185  
FAX: (408) 241-0390



820 Kiely Blvd.  
(Between Homestead and Kaiser)  
Santa Clara, CA 95051

Mon - Fri: 9 AM - 7:30 P.M.  
Sat - Sun: 10:30 AM - 6 P.M.

OPEN 7 DAYS



- No surcharge for Visa, Discover & MasterCard
- Govt., universities and qualified firms purchase orders accepted on approved credit
- Financing plan available OAC
- Reseller & quantity pricing available
- Prices are subject to change without notice and to stock on hand
- Not responsible for typographical errors
- Call for items not listed

## I BASIC SYSTEMS



## ORCHID (CAD STATION)



Super Board  
4 MB, TEAC 1.2 FD  
Maxtor 130 MB HD, IDE Controller, 2S 1P  
Mid Tower Case w. 220W  
Mitsumi 101 Keyboard  
EMC 1430 monitor 14" 1024x768 .28 NI  
Fahrenheit VLB 1MB VGA  
MS Serial Mouse, MS DOS 6.0 & WIN 3.1

|                            |      |
|----------------------------|------|
| VLB 486-33, 256K cache     | 1715 |
| VLB 486-50, 256K cache     | 1850 |
| VLB 486-DX2-66, 256K cache | 1940 |

## MICRONICS COMPUTERS INC.

4 MB, TEAC 1.2 FD  
IDE Controller, 2S 1P  
Baby AT Case w/ 200W  
Mitsumi 101 Keyboard  
MS Serial Mouse  
MS DOS 6.0 & Windows 3.1

|                                     |      |
|-------------------------------------|------|
| 486-DX2-66 ISA 256K cache VLB       | 1415 |
| 486-33 ISA 256K cache VLB           | 1195 |
| 486-33 ISA 256K cache MiniBoard     | 1185 |
| 486-50 ISA 256K cahce MiniBoard     | 1295 |
| 486-DX2-66 ISA 256K cache MiniBoard | 1415 |

## NICE



(MADE IN U.S.A)

4 MB, TEAC 1.2 MB FD  
IDE Controller, 2S 1P  
Baby AT Case w. 200W  
Mitsumi 101 Keyboard  
MS DOS 6.0 & WIN 3.1  
MS Serial Mouse

|                                     |      |
|-------------------------------------|------|
| 486-DX2-66 EISA 256K VLB            | 1515 |
| 486-50 EISA 256K cache VLB          | 1435 |
| 486-33 ISA VLB 256K cache           | 1075 |
| 486-DX2-66 Mini EISA 256K cache VLB | 1355 |

## IBM PS/Value Point

With: 1.44MB FD, IDE Controller,  
Keyboard, Mouse, I/O ports, SVGA  
Case: AT ( DeskTop , 5 slots, 5 bays )  
MT ( MiniTower, 8 slots, 6 bays )

with OS/2 & 8MB RAM :

|                              |      |
|------------------------------|------|
| 486 DX2-66 527MB HD, MT, VLB | 3295 |
| 340MB HD, AT, VLB            | 2745 |
| 212MB HD, AT, ISA            | 2350 |
| 486-DX-33 340MB HD, MT, VLB  | 2525 |
| 340MB HD, AT, VLB            | 2345 |
| 212MB HD, AT, ISA            | 1765 |

with WIN & DOS & 4MB RAM :

|                              |        |
|------------------------------|--------|
| 486 DX2-66 527MB HD, MT, VLB | 3125   |
| 245MB HD, AT, VLB            | 2395   |
| 212MB HD, AT, ISA            | 2125   |
| 486 DX-33 340MB HD, MT, VLB  | 2325   |
| 212MB HD, AT, ISA (special)  | (1525) |
| 120MB HD, AT, VLB            | 1795   |

## II HARDWARE

### 1. CD ROM

|                                           |          |
|-------------------------------------------|----------|
| Sony CD Caddy                             | 6.95     |
| Gallant Sound Card                        | 69       |
| Labtec Speakers CS150/ CS180/ CS550       | 25/29/32 |
| Koss Maximum DR Amplified Speakers        | 69       |
| Koss Amplified Mini Speakers w. Equalizer | 45       |
| Turtle Beach 16 bit MultiSound            | (499)515 |

#### CREATIVE LAB

|                                                 |         |
|-------------------------------------------------|---------|
| CD-ROM Upgrade Kit w. 4 CD Int                  | 375     |
| CD 531 Ext w. Ext Kit                           | 239     |
| Discovery CD-16 Int                             | 469     |
| Edutainment CD-16 Int Kit                       | 499     |
| Sound Blaster Pro Multimedia Kit w. 6 CD titles | 515/459 |
| - Internal / External                           | 515/459 |
| Sound Blaster Deluxe                            | 85      |
| Sound Blaster Pro Deluxe                        | 119     |
| Sound Blaster Pro Basic                         | 105     |
| Sound Blaster 16 ASP                            | 199     |
| Video Blaster / Video Spigot for Win            | 315/415 |
| Voice Blaster / Wave Blaster                    | 75/224  |
| Midi Kit                                        | 59      |

#### LOGITECH

|             |     |
|-------------|-----|
| Soundman 16 | 125 |
|-------------|-----|

#### MEDIA VISION

|                                         |       |
|-----------------------------------------|-------|
| Fusion Double CD 16                     | 599   |
| Multimedia Upgrade Kit (w. Spectrum 16) | 779   |
| Midi Mate / w. Passport Design Trax     | 49/89 |
| Pro 16 Multimedia System II             | 859   |
| Pro Audio Spectrum 16                   | 145   |
| Pro Audio Studio 16                     | 199   |
| Pro Movie Spectrum                      | 285   |
| Pro Movie Spectrum Studio               | 335   |

#### MITSUMI

|                           |     |
|---------------------------|-----|
| CRMC-LU005S w. controller | 179 |
|---------------------------|-----|

#### NEC

|                                  |         |
|----------------------------------|---------|
| CDR-74 280ms, 300KB/s, Ext       | 525     |
| CDR-84 280ms, 300KB/s, Int       | 425     |
| Interface Kit for PC             | 89      |
| Multimedia Upgrade Kit Int / Ext | 795/895 |

#### PANASONIC

|                                        |         |
|----------------------------------------|---------|
| 562 320ms, 300KB/s Ext / w. controller | 249/269 |
|----------------------------------------|---------|

#### SONY (w/o software)

|                          |     |
|--------------------------|-----|
| CD 31A w. controller Int | 179 |
|--------------------------|-----|

#### TEXEL

|                                       |         |
|---------------------------------------|---------|
| DM-3024 265ms, Int / w. controller    | 335/405 |
| DM-5024 265ms, Ext / w. controller    | 445/515 |
| DM-3028 280ms, Int / w. controller    | 395/465 |
| DM-5028 280ms, Ext / w. controller    | 515/585 |
| Driver kit for Media Vision Int / Ext | 29/69   |

#### TOSHIBA

|                                           |         |
|-------------------------------------------|---------|
| 3401B 200ms 330KB/s Int / w. controller   | 395/465 |
| 3401E 200ms 330KB/s Ext / w. controller   | 535/605 |
| 3401E Ext w. Toshiba Case / w. controller | 569/639 |
| Driver kit for Media Vision Int / Ext     | 29/69   |

#### TRANTOR

|                                           |     |
|-------------------------------------------|-----|
| Mini SCSI Plus (Parallel to SCSI Adapter) | 189 |
| Music Box v.2                             | 29  |
| T130 SCSI Interface Kit (w/o cable)       | 79  |

CD SOFTWARE Titles - See Sec. III

### 2. CASES

|                                       |         |
|---------------------------------------|---------|
| Baby AT w. 200W Power                 | 69      |
| Baby Tower w. 200W Power              | 69      |
| Mid Tower w. 230W Power               | 79      |
| Mid Tower w. 250W Power: Black/ White | 139/129 |

|                                                          |         |
|----------------------------------------------------------|---------|
| Full Tower w. 250W Power                                 | 129     |
| Full Tower w. 300W Power: Black/ White                   | 199/189 |
| Slim w. 200W (2 drive bay)                               | 79      |
| Hard Disk Drive External Casing                          |         |
| - 1 half ht or SCSI for Mac, 40W, w. Int cable           | 99      |
| - 2 half ht or 1 full ht for PC, 60W                     | 119     |
| - 2 half ht or 1 full ht for Mac, w. cables 60W          | 145     |
| - 3 half ht or 1 full & 1 half ht for PC, 60W            | 139     |
| - 3 half ht or 1 full & 1 half ht for Mac, w. cables 165 |         |

### 3. CONTROLLERS

|                                       |     |
|---------------------------------------|-----|
| COREL SCSI software                   | 75  |
| ACCULOGIC                             |     |
| side-4 plus (2FD & 2IDE HD, 2S & 1 P) | 49  |
| ADAPTEC                               |     |
| 1522K SCSI w. Kit (3MB/s)             | 159 |
| 1542C SCSI w. Kit (10MB/s)            | 249 |
| 1542C Plus w. ASW 500                 | 315 |
| 1640 SCSI w. Kit for MCA              | 335 |
| 2742T SCSI EISA w. Kit                | 399 |
| ASW-1410 ASPI MS-DOS Manager v3.0     | 69  |
| ASW-EZ SCSI for DOS & WIN             | 69  |
| ASW-310 Sy-Tos Plus (tape backup s/w) | 99  |

#### AIR

|                |    |
|----------------|----|
| IDE w. I/O VLB | 69 |
|----------------|----|

#### ALWAY TECHNOLOGY

|                                      |     |
|--------------------------------------|-----|
| IN 2000 High Performance 16 bit SCSI | 179 |
|--------------------------------------|-----|

#### AMI

|                                       |     |
|---------------------------------------|-----|
| FastDisk cache SCSI EISA (up to 16MB) | 495 |
|---------------------------------------|-----|

|                           |     |
|---------------------------|-----|
| FastLan Ethernet-SCSI VLB | 465 |
|---------------------------|-----|

#### DTL

|               |     |
|---------------|-----|
| 2290 IDE EISA | 139 |
|---------------|-----|

|             |     |
|-------------|-----|
| 3280AS SCSI | 105 |
|-------------|-----|

#### FUTURE DOMAIN SCSI Controller

|                          |     |
|--------------------------|-----|
| TMC 1660 for AT (H only) | 119 |
|--------------------------|-----|

|                                |     |
|--------------------------------|-----|
| TMC 1680 for AT (4F&H, 15MB/s) | 129 |
|--------------------------------|-----|

|                                |     |
|--------------------------------|-----|
| TMC 1680 SVP (SCSI value pack) | 155 |
|--------------------------------|-----|

#### KOUWELL

|                                  |    |
|----------------------------------|----|
| 4 Floppies controller for XT, AT | 33 |
|----------------------------------|----|

|                |    |
|----------------|----|
| IDE controller | 27 |
|----------------|----|

|                                     |    |
|-------------------------------------|----|
| IDE controller w. AT I/O (2S 1P 1G) | 34 |
|-------------------------------------|----|

|                                            |    |
|--------------------------------------------|----|
| IDE controller w. NS16550 chips (2S 1P 1G) | 59 |
|--------------------------------------------|----|

|                                      |    |
|--------------------------------------|----|
| IDE controller w. AT I/O (2S 1P) VLB | 55 |
|--------------------------------------|----|

#### MICROSOLUTIONS

|                                               |  |
|-----------------------------------------------|--|
| CompatiCard IV: 4 Floppies controller (2 ext) |  |
|-----------------------------------------------|--|

|                                  |    |
|----------------------------------|----|
| 360K/720K/1.2MB/1.44MB/2.88MB FD | 79 |
|----------------------------------|----|

#### MYLEX

|                   |     |
|-------------------|-----|
| DCE 376 EISA SCSI | 550 |
|-------------------|-----|

#### NCL America (w. on board Bios)

|                             |    |
|-----------------------------|----|
| 538B IDE for AT (2HD & 2FD) | 39 |
|-----------------------------|----|

#### ORCHID

|                                    |    |
|------------------------------------|----|
| VESA LBus IDE (2HD, 2FD) w. AT I/O | 79 |
|------------------------------------|----|

#### PROMISE Drive Cache Controller

|                             |     |
|-----------------------------|-----|
| DC 200 IDE cache up to 16MB | 109 |
|-----------------------------|-----|

|                                  |     |
|----------------------------------|-----|
| DC 2032 IDE I/O cache up to 16MB | 129 |
|----------------------------------|-----|

|                               |     |
|-------------------------------|-----|
| DC 2040 SCSI cache up to 16MB | 189 |
|-------------------------------|-----|

|                          |    |
|--------------------------|----|
| - Bios chips & CD driver | 39 |
|--------------------------|----|

|                                    |     |
|------------------------------------|-----|
| DC 4030VL IDE VLB cache up to 16MB | 139 |
|------------------------------------|-----|

#### ULTRASTOR (w/o cable)

|                            |     |
|----------------------------|-----|
| ULT 14F ISA SCSI 32K cache | 199 |
|----------------------------|-----|

|                             |     |
|-----------------------------|-----|
| ULT 24F SCSI EISA 64K cache | 365 |
|-----------------------------|-----|

|                                 |     |
|---------------------------------|-----|
| ULT 34F VL Bus SCSI-2 32K cache | 275 |
|---------------------------------|-----|

#### WONDER SYSTEMS (USA made)

|                   |    |
|-------------------|----|
| IDE w. 4 Floppies | 29 |
|-------------------|----|

|                                      |  |
|--------------------------------------|--|
| IDE w. 4 FD/ 2.88MB/ w. drivers tape |  |
|--------------------------------------|--|

|                   |    |
|-------------------|----|
| 1.0 Mbps FD speed | 39 |
|-------------------|----|

|                                         |  |
|-----------------------------------------|--|
| IDE w. 2HD/ 4FD/ 2S 1P/ w. drivers tape |  |
|-----------------------------------------|--|

|                                       |    |
|---------------------------------------|----|
| 51RQ for com ports, 1.0 Mbps FD speed | 45 |
|---------------------------------------|----|

|                                      |    |
|--------------------------------------|----|
| IDE w. 4FD/ 3S 2P 1G (2S16550 chips) | 79 |
|--------------------------------------|----|

|                                |    |
|--------------------------------|----|
| For SCSI HD, w. CD-ROM drivers | 59 |
|--------------------------------|----|

### 4. CPU

|              |    |
|--------------|----|
| AMD386 DX-40 | 75 |
|--------------|----|

#### INTEL

|                   |    |
|-------------------|----|
| 386 DX-25 / DX-33 | 75 |
|-------------------|----|

|                   |         |
|-------------------|---------|
| 486 DX-33 / DX-50 | 299/439 |
|-------------------|---------|

|                     |         |
|---------------------|---------|
| 486 DX2-50 / DX2-66 | 409/499 |
|---------------------|---------|

#### MATH CO PROCESSOR

#### CYRIX

|                 |       |
|-----------------|-------|
| 83D87 - 33 / 40 | 70/75 |
|-----------------|-------|

|                      |        |
|----------------------|--------|
| Cx486 DLC TI 33 / 40 | 89/119 |
|----------------------|--------|

#### INTEL

|               |       |
|---------------|-------|
| 387DX / 387SX | 85/79 |
|---------------|-------|

#### OverDrive Processor

|                   |     |
|-------------------|-----|
| - 486 SX16 / SX20 | 325 |
|-------------------|-----|

|                   |     |
|-------------------|-----|
| - 486 SX25 / DX25 | 445 |
|-------------------|-----|

|                   |     |
|-------------------|-----|
| - 486 SX33 / DX33 | 545 |
|-------------------|-----|

|                         |       |
|-------------------------|-------|
| Cooling Fan (heat sink) | 19.50 |
|-------------------------|-------|

### 5. DIGITIZERS

|                                       |     |
|---------------------------------------|-----|
| SummaSketch III 12x12, 4 or 16 button | 275 |
|---------------------------------------|-----|

|                                       |     |
|---------------------------------------|-----|
| SummaSketch III 12x18, 4 or 16 button | 549 |
|---------------------------------------|-----|

#### WACOM

|                                   |     |
|-----------------------------------|-----|
| SD-510C 6 x 9, w. Pressure Stylus | 459 |
|-----------------------------------|-----|

|                              |     |
|------------------------------|-----|
| SD-510C Tablet + Painter 2.0 | 499 |
|------------------------------|-----|

|                                     |     |
|-------------------------------------|-----|
| SD-420E 12 x 12, w. Pressure Stylus | 655 |
|-------------------------------------|-----|

|                              |     |
|------------------------------|-----|
| SD-420E Tablet + Painter 2.0 | 699 |
|------------------------------|-----|

### 6. DRIVES

|                                            |   |
|--------------------------------------------|---|
| Frame for 3.5" Hard Drive and Floppy Drive | 6 |
|--------------------------------------------|---|

|                                       |    |
|---------------------------------------|----|
| Removable Hard Drive Case for 3.5" HD | 39 |
|---------------------------------------|----|

#### HARD DRIVES

#### CONNER

|                                      |     |
|--------------------------------------|-----|
| CP30174E 170MB 18ms IDE 3.5", 1" ht. | 175 |
|--------------------------------------|-----|

|                                    |     |
|------------------------------------|-----|
| CP-30254H 250MB 14ms IDE 32K 1" ht | 225 |
|------------------------------------|-----|

|                          |     |
|--------------------------|-----|
| CP-3504 500MB IDE 1/2 ht | 519 |
|--------------------------|-----|

|                               |     |
|-------------------------------|-----|
| CP-30544 544MB 12ms IDE 1" ht | 549 |
|-------------------------------|-----|

#### FUJITSU (5 years warranty by manufacturer)

|                            |     |
|----------------------------|-----|
| 2624FA 520MB 12ms SCSI-1&2 | 635 |
|----------------------------|-----|

|                                         |     |
|-----------------------------------------|-----|
| M2694ESA 1.0GB 10ms SCSI-2 3.5" 1/2"ht. | 995 |
|-----------------------------------------|-----|

|                                     |      |
|-------------------------------------|------|
| M2654S 2.1GB 12ms SCSI-2 5.25" full | 1699 |
|-------------------------------------|------|

#### MAXTOR

|                               |     |
|-------------------------------|-----|
| MXT 7131A 130MB 15ms IDE 3.5" | 175 |
|-------------------------------|-----|

|                               |     |
|-------------------------------|-----|
| MXT 7213A 213MB 15ms IDE 3.5" | 215 |
|-------------------------------|-----|

|                               |     |
|-------------------------------|-----|
| LXT 7345A 345MB 14ms IDE 3.5" | 295 |
|-------------------------------|-----|

|                                 |     |
|---------------------------------|-----|
| MXT 7345S 345MB 15ms SCSI 1" ht | 355 |
|---------------------------------|-----|

|                                   |     |
|-----------------------------------|-----|
| MXT 540SL 540MB 8.5ms SCSI-2 1"ht | 749 |
|-----------------------------------|-----|

|                                   |      |
|-----------------------------------|------|
| MXT 1240S 1.2GB 8.5ms SCSI-2 3.5" | 1239 |
|-----------------------------------|------|

|                       |     |
|-----------------------|-----|
| PO-12 1.2GB 13ms SCSI | 895 |
|-----------------------|-----|

|                        |      |
|------------------------|------|
| PI-17S 1.7GB 13ms SCSI | 1125 |
|------------------------|------|

|                                            |  |
|--------------------------------------------|--|
| Optical Drives : Rewritable 1 GB 35ms SCSI |  |
|--------------------------------------------|--|

|                                      |          |
|--------------------------------------|----------|
| Ext Tahiti II / 1 GB Cartridge Glass | 2635/199 |
|--------------------------------------|----------|

#### QUANTUM

|                                    |     |
|------------------------------------|-----|
| EIS 127AT 127MB 17ms IDE 32K cache | 169 |
|------------------------------------|-----|

|                          |     |
|--------------------------|-----|
| EIS 170AT 170MB 17ms IDE | 185 |
|--------------------------|-----|

|                                     |     |
|-------------------------------------|-----|
| LPS-240AT 244MB 16ms IDE 256K cahce | 235 |
|-------------------------------------|-----|

|                                     |     |
|-------------------------------------|-----|
| LPS-240S 244MB 16ms SCSI 256K cache | 245 |
|-------------------------------------|-----|

|                                     |     |
|-------------------------------------|-----|
| LPS-525S 525MB 10ms SCSI 512K cache | 595 |
|-------------------------------------|-----|

|                                 |     |
|---------------------------------|-----|
| PRO-700S 700MB 10ms SCSI-2 512K | 765 |
|---------------------------------|-----|

|                                     |     |
|-------------------------------------|-----|
| PRO-1225S 1.2GB 9ms SCSI 1.2M cache | 995 |
|-------------------------------------|-----|

#### FLOPPY DRIVES

|                                         |  |
|-----------------------------------------|--|
| MICRO SOLUTIONS (External Floppy Drive) |  |
|-----------------------------------------|--|

|                               |     |
|-------------------------------|-----|
| 1.2 / 1.44 (use printer port) | 175 |
|-------------------------------|-----|

#### IOmega

|                                         |     |
|-----------------------------------------|-----|
| 21MB Floptical Insider + Corel Draw 3.0 | 499 |
|-----------------------------------------|-----|

#### SYQUEST

|                                          |     |
|------------------------------------------|-----|
| SQ44e 44MB Ext w. controller & cartridge | 379 |
|------------------------------------------|-----|

#### TEAC (Floppy Drive)

|                                    |       |
|------------------------------------|-------|
| 1.2MB 5.25" / 1.44MB 3.5" w. frame | 48/42 |
|------------------------------------|-------|

|                     |    |
|---------------------|----|
| 2.8MB 3.5" w. frame | 85 |
|---------------------|----|

### 7. I/O CARDS

#### KOUWELL

|                                      |    |
|--------------------------------------|----|
| 2S 1P 1G w. NS16550 chipset (XT, AT) | 49 |
|--------------------------------------|----|

|                     |    |
|---------------------|----|
| 4 Serial ports card | 69 |
|---------------------|----|



**COMPUTER MEMORY (3rd Party) :**

|                                |             |
|--------------------------------|-------------|
| IBM                            |             |
| - PS/2 50Z/ 55SX/ 65SX/ 70     |             |
| - 2MB / 4MB                    | 89/159      |
| - PS/2 80 - 111/ 311/ 121/ 321 |             |
| - 2MB                          | 115         |
| IBM PS/2 80 - A21/ A31/ A6     |             |
| - 4MB                          | 279         |
| COMPAQ                         |             |
| - Deskpro 386N/ 386S/ 20       |             |
| - 2MB / 4MB                    | 105/175     |
| - Deskpro 386 - 20e/ 20/ 25e   |             |
| - 1MB / 4MB                    | 95/189      |
| - Deskpro 486M                 |             |
| - 2MB / 4MB / 8MB              | 109/169/309 |
| - LTE 286 - 1MB / 2MB          | 79/109      |
| - LTE 386S/ 386-20             |             |
| - 1MB / 4MB card               | 89/195      |
| - SLT 286                      |             |
| - 1MB / 4MB                    | 99/259      |
| - ProLinea 386 - 25ZS/ 25S     |             |
| - 2MB / 8MB                    | 105/375     |
| - ProLinea 486 - 33/ 50/ 25S   |             |
| - 2MB / 4MB / 8MB              | 95/159/299  |

**KINGSTON MEMORY for**

Apple, AST, AT&T, Compaq, IBM, NEC, Sun . call  
**NOTEBOOK / LAPTOP (3rd Party)**

|                            |             |
|----------------------------|-------------|
| AST EXEC 4MB               | 139         |
| COMPAQ                     |             |
| - Contura                  |             |
| - 2MB / 4MB / 8MB          | 105/165/295 |
| - LTE 20/ 25               |             |
| - 2MB / 4MB / 8MB          | 125/189/340 |
| IBM L40SX/ N33SX           |             |
| - 2MB / 4MB / 8MB          | 125/189/330 |
| MAC PowerBook 140/ 170     |             |
| - 2MB / 4MB                | 135/179     |
| NEC UltraLite III SL25C    |             |
| - 2MB / 4MB / 8MB          | 139/249/435 |
| Packard Bell 386SX         |             |
| - 2MB / 4MB                | 155/259     |
| Panasonic 170/ 270/ 370    |             |
| - 1MB                      | 79          |
| TOSHIBA                    |             |
| - T2200SX 4MB / 8MB        | 179/299     |
| - T3200 3MB                | 189         |
| - T3200SX 2MB / 4MB        | 105/169     |
| - T3100SX 2MB / 4MB        | 109/167     |
| - T5100/ T13100/ T1600 2MB | 115         |
| - T8500/ T5200 2MB / 8MB   | 125/339     |

**LASER PRINTER MEMORY UPGRADE**

|                                  |                |
|----------------------------------|----------------|
| Jet Ram (3rd Party):             |                |
| EPSON EPL 6000                   |                |
| - 2MB/ 4MB                       | 129/199        |
| HP                               |                |
| - Deskjet 500/500C               |                |
| - 256K                           | 75             |
| - Laser Jet IIP+/ IIP/ IIP/ IIPD |                |
| - 1MB / 2MB / 3MB / 4MB          | 79/125/169/215 |
| - Laser Jet II/ IIPD             |                |
| - 1MB / 2MB / 4MB                | 99/145/235     |
| PANASONIC                        |                |
| - KX-P4410/ 4430                 |                |
| - 1MB / 2MB / 4MB                | 95/139/229     |
| - KX-P4420/ 4450I                |                |
| - 1MB/ 2MB/ 4MB                  | 99/145/235     |
| - KX-P4450 -1MB                  | 139            |
| - KX-P4455 -2MB                  | 169            |

|                                         |             |
|-----------------------------------------|-------------|
| QMS                                     |             |
| - P-S 410                               |             |
| - 1MB / 2MB / 4MB                       | 99/145/235  |
| - P-S 815/ 825                          |             |
| - 2MB / 4MB                             | 159/249     |
| TEXAS INSTRUMENTS                       |             |
| - Micro Writer -1MB                     | 69          |
| PACIFIC DATA:                           |             |
| - Pacific 4 for HP IIP+/ IIP/ IIP/ IIPD |             |
| - 1MB / 2MB / 4MB                       | 89/129/209  |
| - 1-2-4 Plus for HP II/ IIPD            |             |
| - 1MB / 2MB / 4MB                       | 115/155/235 |
| - Pacific 4 SIMM for HP 4/ IIP/ XL300   |             |
| - 4MB / 8MB                             | 199/389     |
| - Pacific T for Epson 6000              |             |
| - 2MB / 4MB                             | 199/299     |
| ProTracer                               |             |
| - 5MB / 8MB                             | 375/525     |

**11. MODEMS & FAX**

|                                             |         |
|---------------------------------------------|---------|
| ASAP TF-333 Phone & Fax Auto Switching      | 89      |
| National Semi Tyn 2000 Answer/Fax           | 175     |
| Micc Global Pocket Fax, Tripple 96          | 139     |
| Adtech Micro Systems (dos & win)            |         |
| - Data Fax 9624VI, MNP5                     | 99      |
| - Hi - Per 96/144, MNP5                     | 199     |
| - Pocket 96/24 Fax                          | 115     |
| - Pocket 144/144 Fax                        | 269     |
| E-Tech                                      |         |
| - Ufomate Pocket Fax modem (w. Win/DOS s/w) |         |
| - P1496MX / P9696MX                         | 225/185 |
| - P1414MX (Distinguish ring & Called ID)    | 259     |
| EVEREX                                      |         |
| - Evercom 9600 v.42, v.32, MNP5 Int         | 135     |
| FRECOM (special)                            |         |
| - Fax 96 w. 1 Liner & Far Fetch Fax         | 115     |
| - Fax 96 & modem for DOS (special)          | 85      |
| GVC                                         |         |
| - 14.4 Fax Modem Int / Ext                  | 159/179 |

**HAYES**

|                                         |         |
|-----------------------------------------|---------|
| Accura 2400 Int / Ext                   | 49/55   |
| Accura 96 + Fax Int / Ext               | 209/239 |
| Accura 14.4 + Fax Int / Ext             | 225/255 |
| Optima 96 Ext + Fax 96                  | 375     |
| Optima 144 Ext + Fax 144                | 389     |
| Pocket edition 2400 w. Smartcom EZ      | 129     |
| Ultra 96 v.42, MNP5 Ext                 | 545     |
| Ultra 144 v.32bis, v.42, v.42bis Ext    | 575     |
| V-series SmartModem 9600 v.42, MNP5 Ext | 499     |

**INTEL**

|                                        |          |
|----------------------------------------|----------|
| Faxability Plus/OCR for WIN trade-up   | 99       |
| SatisFaxtion modem (w. FAXability s/w) |          |
| - 100 Int send96 rec.48, 2400 modem    | 99       |
| - 200 Int 96/24 v.42, MNP5             | 295      |
| - 300 Int 96/144 v.42- no scan port    | (235)245 |
| - 350 Int 14.4 Fax / 96 modem v.42bis  | (309)319 |
| - 400 Int 144/144 v.42, v.32bis, MNP5  | (385)395 |
| - 400e Ext 96/14.4, 4K data buffer     | 399      |
| New Fax Modem 24/96 Int                | 55       |
| New Fax Modem 24V/96 v.42bis Int / Ext | 119/129  |
| New Fax Modem 96 Int / Ext             | 159/175  |
| New Fax Modem 14.4 Int / Ext           | 179/199  |

**MEGAHERTZ**

|                                   |         |
|-----------------------------------|---------|
| PCMCIA 14.4 Fax modem / w. X-Jack | 445/459 |
| PCMCIA 96/24 Fax modem w. X-Jack  | 299     |
| PZ144 Pocket 14.4/14.4            | 415     |

**MICROCOM**

|                              |     |
|------------------------------|-----|
| Microporte 4232bis Fax modem | 465 |
| QX 4232bis modem             | 455 |
| QX 4232bis+ modem            | 575 |

**PRACTICAL PERIPHERALS**

|                                        |         |
|----------------------------------------|---------|
| PM14.4FX14.4 Int                       | 219     |
| Pocket 14.4 Fax Modem                  | 369     |
| Mini Tower 96/96 Ext                   | 209     |
| Mini Tower 14.4/14.4 Ext               | 235     |
| PM2400 Mini pocket modem               | (85)119 |
| FaxMe (turn HP Laser to Fax receiving) | 175     |

**SIIG**

|                                    |     |
|------------------------------------|-----|
| TeleCommunicator 10-in-1 Fax Modem | 239 |
|------------------------------------|-----|

**US ROBOTICS**

|                                           |         |
|-------------------------------------------|---------|
| Courier 144 v.32bis, v.42, MNP5 Int       | 375     |
| Courier 144 v.32bis, v.42, MNP5 Ext       | 385     |
| Courier 144 w. Fax Ext                    | 399     |
| Courier HST-DS 144 v.32bis, v.42, MNP Ext | 725     |
| Sportster 96 modem MNP5 Int/ Ext          | 149/149 |
| Sportster 96/96 Fax Ext                   | 159     |
| Sportster 14.4/14.4 FAX MNP5 Int/ Ext     | 169/189 |
| Sportster 14.4/14.4 Fax for Mac Ext       | 209     |
| Shared Access Modem Sharing Kit           | 675     |

**ZOLTRIX**

|                                         |     |
|-----------------------------------------|-----|
| 2400 baud modem w. MNP5 Int             | 39  |
| 96/24 send & rec. fax/modem w. MNP5 Int | 69  |
| 96/24 fax/modem v.42, MNP5 Int          | 99  |
| 14.4/14.4 fax/modem Int                 | 159 |

**ZOOM**

|                                |         |
|--------------------------------|---------|
| AFC Int / AFX Ext              | 59/79   |
| FC9624V w. WinFax Lite Int     | 95      |
| FX9624V w. WinFax Lite Ext     | 99      |
| 96/96 w. WinFax Lite Int/Ext   | 189/199 |
| 144/144 w. WinFax Lite Int/Ext | 205/219 |

**ZY-XEL**

|                                         |     |
|-----------------------------------------|-----|
| U1496B 16.8 voice 14.4 Fax WINs/w Int   | 345 |
| U1496B+ upgradable to 19.2Kbps Int      | 455 |
| U1496E 16.8 voice 14.4 Fax WIN, LED Ext | 349 |
| U1496F+ upgradable to 19.2Kbps Ext      | 459 |

**12. MONITORS**

|                                           |      |
|-------------------------------------------|------|
| 9" VGA Mono paper white 640 x 480         | 135  |
| SIIG                                      |      |
| 9" Mono paper white                       | 115  |
| EMC                                       |      |
| EM 1412 14" Mono amber, 90-260v           | 95   |
| EM 1428 14" 1024x768 .28, 90-260v         | 279  |
| EM 1430K 14" 1024 x 768 .28, NI, 90-260v  | 315  |
| EM 1439G 14" 1024 x 768 .39               | 235  |
| HITACHI                                   |      |
| CM2095 20" 1280 x 1024 .31                | 1450 |
| CM2187 21" 1680 x 1280 .31                | 2095 |
| Accurve PS20 20" 1600 x 1280 .28          | 1695 |
| Accurve PS21AM 21" 1600 x 1280 .28        | 2395 |
| IBM PS/Value Point                        |      |
| 6312 14" 1024x768 .28, NI                 | 399  |
| 6314 14" .28, NI w. Digital Pro Control   | 445  |
| 6319 15" Flat 1024x768 .28, NI            | 559  |
| MAG (Auto Switch Power Supply)            |      |
| MX15F 15" Flat 1280x1024 .28, NI, MacII   | 495  |
| MX17F 17" Flat 1280x1024 .26, NI, MacII   | 975  |
| Mac Adapter                               | 25   |
| M VIEW                                    |      |
| L1428 14" Mono Amber                      | 95   |
| MITSUBISHI                                |      |
| HL6955SETK 20" 1280x1024 .31, NI          | 1745 |
| Diamond ProTrs 6705 17" 1280x1024 .26     |      |
| NI, Trinitron, MacII, 100-240v            | 1045 |
| BNC Cable                                 | 39   |
| NANAO (100-240v)                          |      |
| F340IW 15" Full Flat screen, 1024x768 .28 | 699  |
| T560I 17" 1280x1024 .25, NI, MacII        | 1695 |
| F550I 17" 1280x1024 .28, NI, Mac          | 1075 |
| F550IW 17" 1280 x 1024 .28, NI, Mac       | 1125 |
| T660I 20" 1280x1024 .31, NI, Trin. MacII  | 2595 |
| F750I 21" 1280x1024 .31, NI, MacII        | 2095 |
| MacII cable adapter                       | 69   |
| NEC (120v)                                |      |
| 3FG6 15" 1024x768 .28, Mac                | 599  |

|                                                 |                |
|-------------------------------------------------|----------------|
| 4FG6 15" Flat 1024x768 .28, NI, Mac             | 699            |
| 5FG6 17" 1024x768 .28 NI (no Accu color)        | 1099           |
| 6FG 21" Flat 1280x1024 .28, Mac                 | 2395           |
| NEC Monitor Lens (Anti-reflection, Anti-static) |                |
| - for 4FG / 5FG / 6FG (special)                 | (65)/(105)/185 |
| FG / MacII cable adapter kit                    | 19.50          |

**PANASONIC (90-140v)**

|                                          |      |
|------------------------------------------|------|
| C1381I 14" SVGA 1024x768 .28, Int, MacII | 325  |
| C1395 14" 1024x768 .28, NI, MacII        | 435  |
| C1991 20" 1024x768 .31, NI, MacII        | 1455 |

**POWER II**

|                                          |     |
|------------------------------------------|-----|
| 3E4S 14" SVGA 1024x768 .28, Int, 90-264v | 285 |
|------------------------------------------|-----|

**SAMSUNG**

|                                        |     |
|----------------------------------------|-----|
| CSD5577 15" Flat 1024x768 .28, NI      | 455 |
| CSF7487 17" 1280x1024 .26, NI, 90/264v | 899 |

**SEIKO (90-132v)**

|                                  |      |
|----------------------------------|------|
| CM1450 14" 1024x768 .25, NI      | 425  |
| CM2050 20" 1024x768 .31, NI, Mac | 1495 |

**SONY**

|                                      |      |
|--------------------------------------|------|
| 1430S 14" 1024x768 .25, NI, 120v     | 599  |
| 1604S 17" 1024x768 .25, NI, 100-240v | 945  |
| 1730 17" 1024x768 .25, NI            | 995  |
| 2038 20" 1280x1024 .30, NI           | 2295 |

**VIEWSONIC**

|                                    |      |
|------------------------------------|------|
| 4e 14" 1024x768 .28, Int, 110/220v | 289  |
| 5+ 14" 1024x768 .25, NI, MacII     | 475  |
| 5e 14" 1024x768 .28, NI, MacII     | 395  |
| 6e 14" 1024x768 .28, NI            | 315  |
| 15 15" 1280x1024 .28, NI, Mac II   | 525  |
| 17 17" 1280x1024 .28, NI, Mac II   | 1095 |
| 20 20" 1600x1280 .28, NI, Mac II   | 1795 |
| Mac cable adapter                  | 35   |

**13. MOTHERBOARDS**

|                                        |           |
|----------------------------------------|-----------|
| 386-33 w. 128K cache (no cpu)          | 125       |
| 386-40 w. 128K cache (no cpu)          | 129       |
| 486-33 128K ISA (no cpu)               | 135       |
| AIR (w/o cpu)                          |           |
| 486-33 / DX2-66 256K, 3VLB slots       | 235       |
| 486-33 / DX2-66 256K EISA, 3 VLB slots | 435       |
| AMI                                    |           |
| Super Voyager 486-33 256K VLB          | 795       |
| Super Voyager 486 DX2-66 VLB           | 1099      |
| Enterprise II 486-50 EISA 128K         | 1045      |
| Enterprise III 486-33 256K VLB EISA    | 875       |
| Enterprise III 486 DX2-66 VLB EISA     | 1095/1195 |

**IBM**

|                                             |     |
|---------------------------------------------|-----|
| 486SL-C2-33 / 66 16K Internal cache ISA v.2 |     |
| w. CPU & Math Processor                     | 345 |

**LYNX (made in USA, w/o cpu)**

|                                   |     |
|-----------------------------------|-----|
| 486DX - 33 / 50 / DX2-66 256K VLB | 149 |
|-----------------------------------|-----|

**MICRONICS**

|                                           |             |
|-------------------------------------------|-------------|
| 386SX-20 Phoenix BIOS (32MB max)          | 175         |
| 386-33 64K cache Gemini (32MB max)        | 299         |
| 486-50 256K cache EISA E2                 | 1195        |
| 486-33 Local Bus w. 256K cache            | 635         |
| 486-DX2-66 Local Bus w. 256K cache        | 845         |
| 486-33 256K EISA VLB                      | 845         |
| 486-DX2-66 256K EISA VLB                  | 1045        |
| MiniBoard 486-33 256K cache ISA           | 625         |
| MiniBoard 486-50 256K cache ISA           | 735         |
| MiniBoard 486-DX2-66 256K ISA             | 845         |
| 16MB Memory Card                          | 150         |
| NICE (w/o cpu)                            |             |
| 486-33 / DX2-66 256K VLB                  | 215         |
| 486-50 / DX2-66 256K Mini EISA VLB        | 275         |
| 486-50 / DX2-66 256K EISA VLB             | 435         |
| ORCHID (w/o cpu)                          |             |
| Superboard 486 (VLB for VGA & controller) |             |
| - DX33/ DX50/ DX2-66 256K                 | 185/199/185 |

**QUICK-PATH**

|                                        |     |
|----------------------------------------|-----|
| 486-50 w. 64K cache, 15ns ISA (no cpu) | 255 |
|----------------------------------------|-----|

**14. MOUSE**

|                          |       |
|--------------------------|-------|
| JOYSTICK :               |       |
| Warrior 5, Quick shot    | 14.50 |
| Adapter kit              | 16.50 |
| THRUSTMASTER             |       |
| Flight Control System    | 75    |
| Fight Control System Pro | 125   |
| Rudder Control           | 125   |
| Weapons Control MK II    | 139   |
| AGILER                   |       |
| AGM-600E Serial 400 dpi  | 23.50 |
| ATB-610 Serial Trackball | 24.50 |
| Keen                     | 12.50 |

**APPOINT (portable)**

|              |    |
|--------------|----|
| MousePen Pro | 49 |
| Thumbelina   | 49 |

**KENSINGTON**

|                           |    |
|---------------------------|----|
| Expert serial & trackball | 99 |
|---------------------------|----|

**LOGITECH**

|                                     |       |
|-------------------------------------|-------|
| Cordless II (new)                   | 89    |
| Dexxa Serial                        | 27    |
| First Serial                        | 37    |
| Fotoman Plus Camera for PC & PS/2   | 549   |
| Mouseman Bus / Serial               | 64/59 |
| Scanman 256                         | 179   |
| Scanman 256 w. CatchWord OCR        | 219   |
| Scanman 256 w. OmniPage OCR         | 229   |
| Scanman color - 16.8 million colors | 439   |
| Trackman Portable / Trackman Combo  | 99/75 |

**MICROSOFT**

|                       |     |
|-----------------------|-----|
| Mouse w. WIN 3.1      | 149 |
| Ball Point (portable) | 119 |

|                                   |       |
|-----------------------------------|-------|
| Bus 2.0 (oem) / w. Bus Card       | 53/75 |
| Bus 2.0 w. Expansion Card         | 89    |
| Serial 2.0 (oem)                  | 55    |
| Serial 2.0 w. PS/2 port           | 79    |
| Serial 2.0 w. 9 to 25 pin adapter | 79    |

**MOUSE SYSTEMS**

|                                           |          |
|-------------------------------------------|----------|
| New Point (trackball for laptop & PC)     | 54       |
| Little Mouse PC (2 button optical) serial | 29       |
| Omni (2 button) MS compatible             | 25       |
| PC III Serial (optical) / Mouse Pad       | 59/19    |
| PC Trackball II                           | 55       |
| Page Brush - color scanner (special)      | (299)399 |
| Pen Mate - digitizer                      | 155      |
| Serial Bus Card (9 IRQs)                  | 24       |
| The New Mouse 400CPI (3 button)           | 55       |

**15. NETWORK**

|                                          |     |
|------------------------------------------|-----|
| MAILMAN 2.0 (10-user for Novell NetWare) | 199 |
|------------------------------------------|-----|



**COMPLAN**

|                                           |     |
|-------------------------------------------|-----|
| Ethernet                                  |     |
| - 8 bit E100 coax / ET500TP               | 65  |
| - 16 bit E200 coax / ET600TP              | 75  |
| - Boot Prom (for E100/ E200/ E500/ E600)  | 25  |
| - Hub 8 port TP + 1BNC + 1 cascading      | 265 |
| - 12 port TP + 1BNC + 1 AUI + 1 cascading | 465 |
| Archnet                                   |     |
| - 4-port Archnet Passive Hub              | 19  |
| - 8-port Coax Stackable Active Hub        | 149 |

**D-LINK**

|                                      |      |
|--------------------------------------|------|
| DE-205 TP : 4 Port Hub + 16 bit card | 295  |
| Other Network Cards                  | call |

**KINGSTON**

|                |      |
|----------------|------|
| Networks Cards | call |
|----------------|------|

**FARALLON**

|                                    |     |
|------------------------------------|-----|
| PN381 PhoneNet w. Timbuktu for WIN | 259 |
|------------------------------------|-----|

**GATEWAY COMMUNICATION**

|                                       |        |
|---------------------------------------|--------|
| G/Ethernet 16 coax / 32 bit (special) | 69/299 |
|---------------------------------------|--------|

**IBM**

|                            |         |
|----------------------------|---------|
| PCMCIA for Token Ring 16/4 | 579     |
| PCMCIA 10B2 / 10BT         | 295/295 |

**INTEL**

|                                         |             |
|-----------------------------------------|-------------|
| EtherExpress Flash LAN Adapter (combo)  | 145         |
| EtherExpress 16 coax / 5 pk             | (115)/505   |
| EtherExpress 16 TP / 5 pk               | (117)/509   |
| EtherExpress 16 MCA / 16 MCA TP         | 175/185     |
| EtherExpress 32 EISA                    | 439         |
| 12 port Hub EtherExpress ISA Adapter    | 565         |
| 12 port Hub EtherExpress EISA Adapter   | 645         |
| LAN Protect 1.5 (virus protection)      | 685         |
| LAN Sight 3.0 Network Utility / Monitor | 299         |
| LANSpool s/w 386 NLM v3.5A              | 425         |
| Netport Express XL                      | 465         |
| NetSatisfaxion V.2 (s/w for NOVELL)     | 955         |
| RJ45 Harmonica                          | 55          |
| TokenExpress 16/4 ISA/ EISA/ MCA        | 435/655/475 |

**NOVELL**

|                                        |                    |
|----------------------------------------|--------------------|
| NE2000-plus coax ethernet / 5 pack     | 135/595            |
| NE2000-TP plus TP ethernet / 5 pack    | 129/575            |
| NE2000 Network Lite starter kit / Win  | 355/375            |
| NE2000 Plus Combo / 5 pk               | 145/650            |
| NE3200 Eagle coax EISA                 | 675                |
| NE3200 EXOS coax EISA                  | 625                |
| NTR 2000 Token Ring                    | 435                |
| EPROM for NE2000                       | 35                 |
| EXOS NE10T-Hub, 8 Port (8 TP + 1 coax) | 335                |
| Print Server NPE400 (special)          | (295)350           |
| Network Lite 1.1 + DR DOS 6.0          | 65                 |
| Network Lite w. Win Utilities          | 75                 |
| Network 3.11                           |                    |
| - 5 / 10 / 20-user                     | 585/1345/1885      |
| - 50 / 100 / 250-user                  | 2650/3859/6885     |
| Network 4.01                           |                    |
| - 5 / 10 / 25-user                     | (845)895/1995/2895 |
| - 50 / 100 / 250-user                  | 3925/5495/9695     |

**SMC (Western Digital)**

|                                              |         |
|----------------------------------------------|---------|
| 8003 Plus Elite 8 bit coax                   | 115     |
| 8013 Plus Elite 16 coax / 6 pk               | 125/625 |
| 8013 Plus Elite 16 TP / 6 pk                 | 127/599 |
| 8013 Elite 16 coax / 6 pk                    | 149/775 |
| 8013 Plus/A for MCA / TP                     | 215/219 |
| 8033 Elite 32 bit coax / TP                  | 599/609 |
| Elite Ultra 16 Clax / TP                     | 110/112 |
| Network Boot ROM for ethernet                | 34      |
| 8 Port Concentrator (8TP+1AUI)               | 349     |
| 12 Port Concentrator (12TP+2AUI+1BNC)        | 595     |
| Token Ring 16/4 ISA / MCA                    | 379     |
| WD-8003 EP 8 bit Plus Elite                  | 49      |
| WD-8003WT 8 bit EtherPlus TP (w. cable)      | 29      |
| WD-8003 W/A 8 bit EtherPlus 10T/A (w. cable) | 45      |

**SYNOPTICS**

|                  |      |
|------------------|------|
| Network Products | call |
|------------------|------|

**XIRCOM**

|                               |         |
|-------------------------------|---------|
| PCMCIA CE-10B2 BNC / CE-10BT  | 285/289 |
| PCMCIA CE-10BC Combo          | 325     |
| PE3-10B2 coax pocket adapter  | 285     |
| PE3-10BT TP pocket adapter    | 289     |
| PE3-10BC Combo pocket adapter | 325     |

**CABLES & ACCESSORIES**

|                                             |          |
|---------------------------------------------|----------|
| Twisted pair cable, TP 4-pair, PVC, Level 3 |          |
| - 1000' / 500' / 200'                       | 89/55/35 |
| 10 BASE-T cable, 1000' Level 3 plenum       | 165      |
| RG58 cable, 1000'                           | 109      |
| Authen 4 port Hublet                        | 215      |
| Belden 8259, RG58, 1000'                    | 165      |

**16. POWER SUPPLIES**

**AMERICAN POWER CONVERSION (UPS)**

|                                          |     |
|------------------------------------------|-----|
| APC-400 Smart-UPS (286, 386 WS)          | 289 |
| APC-600 Smart-UPS (386, 486 FS)          | 359 |
| APC-900 Smart-UPS (386, 486, FS & WS)    | 569 |
| APC-1250 Smart-UPS (multiple FS & WS)    | 725 |
| APC-450 Back-UPS 286, ps/2, 386          | 215 |
| APC-600 Back-UPS 286, 386 FS             | 285 |
| APC-900 Back-UPS                         | 395 |
| APC PowerChute Plus for Novell / OS/2    | 75  |
| APC UPS Monitoring Board for NetWare     | 69  |
| Power Doctor (DOS) I/F Kit for Smart-UPS | 79  |

**GENERAL**

|                                     |     |
|-------------------------------------|-----|
| 250W for Baby AT/ Baby or Mid Tower | 45  |
| 250W for AT                         | 47  |
| 250W for Full Tower                 | 49  |
| 300W for Full Tower                 | 69  |
| 550W for UPS                        | 279 |
| 1200W for UPS                       | 659 |

**PC POWER COOLING**

|                                       |    |
|---------------------------------------|----|
| Standard 220 for desktop / full tower | 85 |
|---------------------------------------|----|

|                                                                                     |         |
|-------------------------------------------------------------------------------------|---------|
| Silencer 270                                                                        |         |
| - for slim (baby or mid tower)                                                      | 149     |
| - for AT desktop / full tower                                                       | 165/165 |
| Turbo-Cool 300                                                                      |         |
| - for slim (baby or mid tower)                                                      | 149     |
| - for desktop / full tower                                                          | 175/175 |
| Turbo-Cool 450 for desktop / full tower                                             | 325     |
| InnerSource 2210 UPS for full tower, Int, 95-132v, 220W DC, 100W AC, =550VA Ext UPS | 299     |
| Novell Network Interface                                                            |         |
| - for InnerSource 2210 UPS                                                          | 55      |

**TRIPP LITE**

|                                           |      |
|-------------------------------------------|------|
| BC 500 Lan (UPS, 350W)                    | 215  |
| BC 900 Lan (UPS, 650W)                    | 365  |
| Iso - Bar                                 | call |
| Omni 450 Lan (UPS 325W + Line Regulation) | 275  |
| Omni 600 Lan (UPS 425W + Line Regulation) | 339  |
| Omni 900 Lan (UPS 650W + Line Regulation) | 499  |

**17. PRINTERS**

**BROTHER**

|                                      |     |
|--------------------------------------|-----|
| HJ-400 Desktop Ink Jet for PC or Mac | 295 |
| HL-6T Laser 6ppm (2 yr. warranty)    | 575 |

**CANON**

|                |     |
|----------------|-----|
| BJ-200 InkJet  | 319 |
| BJ-300 desktop | 349 |

**CITIZEN**

|                                          |       |
|------------------------------------------|-------|
| GSX 145 (24 pin, 132 column)             | 355   |
| - Color Option for GSX 145 / for GSX 130 | 65/45 |
| GSX 230 Fonts & quiet                    | 249   |
| GSX 240 Scalable Fonts & quiet           | 295   |
| PN48 notebook, 1ppm, 2lb, battery, case  | 299   |

**MICROTEK**

|                                       |      |
|---------------------------------------|------|
| TrueLaser MTP-306 6ppm, 2MB, 35 fonts | 1195 |
|---------------------------------------|------|

**HP (HEWLETT PACKARD) LaserJet w. toner**

|                             |                    |
|-----------------------------|--------------------|
| Desk Jet 500 / 500C / 550C  | 299/399/599        |
| Desk Jet 1200C / Postscript | 1375/1975          |
| Laser Jet IIIP              | 839                |
| Laser Jet 4 / 4M / 4L / 4ML | 1359/1865/679/1045 |
| Laser Jet 4SI / 4SIMX       | 2995/4295          |
| Paint Jet / Paint Jet XL300 | 695/2295           |

**LASER MASTER**

|                                                 |                |
|-------------------------------------------------|----------------|
| Utility XL1200 / XLT / XLO                      | 4795/6495/7995 |
| Win Printer 800 (Postscript)                    | 1095           |
| Win Printer XL600 11x17, 600x600PPI             | 2395           |
| WinJet 800 Postscript for HP II, IID, III, IIID | 450            |
| WinJet 1200 Postscript for HP 4                 | 775            |

**PACIFIC DATA PRODUCTS**

|                                                                               |         |
|-------------------------------------------------------------------------------|---------|
| ProTracer Inkjet, A to C size output, 360dpi, i960RISC processor, 512K, 45dBA | 1175    |
| - Postscript emulation card                                                   | 375     |
| - HP-GL emulation Card                                                        | 315     |
| - Sheet Feeder / II                                                           | 135/115 |
| - Ink Cartridges                                                              | 19.50   |
| Pro Tracer HP GL Bundle w. 5MB                                                | 1745    |

**PANASONIC**

|                                        |             |
|----------------------------------------|-------------|
| 1123 / 1124 / 1624                     | 195/259/349 |
| - Auto Sheet Feeder for 1124 KX-P36    | 120         |
| 2023 24pin, quiet printer              | 199         |
| 2123 24 pin, 43.5dBA, color capability | 239         |
| 2124 24 pin, 43.5dBA, color capability | 319         |
| 2624 24 pin, quiet printer, 46.5 dBA   | 375         |
| 2180 9 pin, 45 dBA, color capability   | 159         |
| Color upgrade Kit KX-PCK11             | 49          |
| Single bin cut sheet feeder KX-PT10    | 95          |
| 32K Buffer dot matrix printers KX-P43  | 65          |
| Serial Interface card PS-13            | 75          |
| 4410 Laser, 512K, 5ppm                 | 499         |
| - Corona KX-PCR3                       | 45          |
| - Developer KX-PDP4                    | 105         |
| - Drum KX-PDM4                         | 89          |
| - Extra cassette KX-PKC2               | 45          |
| - Fuser unit KX-PFS5                   | 105         |
| - Optional second cassette KX-P495     | 135         |
| - Toner KX-P453                        | 35          |
| - Fonts Card KX-P47x (for Lasers)      | 95          |
| 4430 Laser, 1 MB, 5ppm                 | 685         |
| - Accessories same as 4410             |             |
| 4420 Accessories                       |             |
| - Developer KX-PDP2                    | 95          |
| - Drum KX-PDM2                         | 99          |
| - Envelope Tray KX-P431                | 59          |
| - Legal Tray KX-P425                   | 45          |
| - Ozone Filter KX-PFT2                 | 26          |
| - Toner KX-P451                        | 39          |
| 4450 Accessories same as 4450i         |             |
| - Developer KX-PDP1                    | 95          |
| - Drum KX-PDM1                         | 145         |
| - Envelope Tray KX-P430                | 59          |
| - Legal Tray KX-P420                   | 45          |
| - Ozone Filter KX-PFT1                 | 29          |
| - Toner KX-P450                        | 35          |
| 4455 Postscript, 11ppm                 | 1695        |
| - others same as 4450i                 |             |

**QMS (Adobe Postscript)**

|                                  |          |
|----------------------------------|----------|
| QMS-PS 410 4ppm, 2MB, 45 Fonts   | 1275     |
| - Envelope / Legal / Letter Tray | 69/69/69 |
| - Lower Cassette w. Letter Tray  | 149      |
| - Toner                          | 95       |

**OKIDATA**

|          |      |
|----------|------|
| Printers | call |
|----------|------|

**SEIKO**

|                                |       |
|--------------------------------|-------|
| Smart Label Printer Pro        | 245   |
| Box of Label (2 rolls per box) | 10.95 |

**TEXAS INSTRUMENTS**

|                               |          |
|-------------------------------|----------|
| Micro Writer PS17 / PS35 5ppm | 935/1195 |
| XLPS 17 16ppm                 | 1895     |
| - Apple Talk Kit              | 99       |

**Laser Printer Accessories:**

**COMPUTER PERIPHERAL**

|                      |     |
|----------------------|-----|
| Jet Page (for HP II) | 125 |
|----------------------|-----|

**HP**

|                                             |        |
|---------------------------------------------|--------|
| Optinal 500 sheet Legal Letter A4 (Jet 4)   | 279    |
| Envelope Power Feeder 75 sheet (Jet 4)      | 279    |
| Legal, Letter or A4 250 sheet Tray (Jet 4)  | 99     |
| Legal, Letter or A4 500 sheet Tray (Jet 4)  | 109    |
| Lower Cassette w. letter tray for IIP, IIIP | 149    |
| Toner for Jet II, III                       | 79     |
| Toner for Jet IIP, IIP+, IIIP               | 66     |
| Toner for HP4 / 4L                          | 109/69 |
| Postscript for Jet 4                        | 359    |

**IO ENGINEERING**

|                                                |     |
|------------------------------------------------|-----|
| True Type Master Library                       | 29  |
| Super Cartridge 2 & 2LC (special)              | 199 |
| Super Cart. 3 Pro+ for HP III, IIID, IIP, IIIS | 199 |
| Desk Jet 500 / Desk Jet Plus Professional      | 99  |

**PACIFIC DATA**

|                                                        |          |
|--------------------------------------------------------|----------|
| 25 in One! (for Deskjet 500)                           | 99       |
| 25 in One! III                                         |          |
| - for HP II, IID, IIP, IIP+, III, Microtek             | 245      |
| Complete Font Library for HP III, IIID, IIP            | 255      |
| Font Bank for all HP Laserjet (New)                    |          |
| stores soft fonts, 0.75MB / 1.5MB                      | 205/269  |
| Headlines Cartridge for HP II, IID, IIP                | 185      |
| Pacific Connect XI                                     |          |
| - For HP II, IID, III, IIID :                          |          |
| -- 5 port 256K / 1MB (4S, 1P)                          | 319/389  |
| -- 10 port 256K / 1MB (10S)                            | 449/519  |
| - For HP 4, IIIS, Paint Jet XL300 :                    |          |
| -- 7 port 1MB / 4MB (6S, 1P)                           | 449/649  |
| -- 10 port 1MB / 4MB (10S)                             | 519/719  |
| Pacific Page & 2MB (Postscript for HP II)              | 389      |
| Pacific Page II / XL (Postscript for HP II)            | 719      |
| Pacific Page 4 (Postscript for HP 4)                   | 279      |
| Pacific Page P.E. (HP IID, IIP, IIP+, III, IIID, IIIP) | 279      |
| Pacific Page P.E. & 2MB                                | 405      |
| Pacific Talk                                           | 179      |
| Pacific Page PE XL (HP IIP, IIP+, III, IIID, IIIP)     |          |
| Postscript w. 2MB & accelerator board                  | 719      |
| Plotter in a Cartridge (HP II)                         | 225      |
| Plotter in a Cartridge P.E.                            |          |
| - for HP IID, IIP, IIP+, III, IIID, IIIP               | 225      |
| PELICAN All type ribbons                               | visit us |

**18. SCANNER**

**HP**

|                          |      |
|--------------------------|------|
| ScanJet II w. Kit        | 795  |
| ScanJet IIC Color w. Kit | 1395 |

**TAMARACK**

|                                              |                |
|----------------------------------------------|----------------|
| ArtiScan Flatbed 24bit color 256 gray levels |                |
| - w. Publisher L.E. 600/800/1200 dpi         | 845/1045/1695  |
| - w. Pub.L.E. & OCR 600/800/1200 dpi         | 895/1095/1745  |
| - w. Photostyler 600/800/1200 dpi            | 995/1195/1845  |
| - w. PhotoShop 2.5 600/800/1200              | 1045/1245/1895 |
| Slide Scan Kit (transparency, slide, X-ray)  |                |
| - 600/ 800/ 1200 dpi                         | 525/525/595    |

**MICROTEK**

|                               |      |
|-------------------------------|------|
| Scan Maker II w. PhotoShop LE | 899  |
| Scan Maker IIXE w. PhotoShop  | 1150 |

**Hand scanners. see Logitech in # 14**

**E-TECH**

|                              |          |
|------------------------------|----------|
| 4256G 256 gray scale (w.OCR) | 99(115)  |
| 4200C 256/4096 color (w.OCR) | 269(289) |

**19. TAPE BACKUP**

**ARCHIVE**

|                |      |
|----------------|------|
| Viper / Python | call |
|----------------|------|

**COLORADO**

|                                        |         |
|----------------------------------------|---------|
| Backup for Windows                     | 45      |
| DJ-10 120MB QIC-40 w. cable / w. Win.  | 145/175 |
| DJ-20 250MB QIC-80 w. cable / w. Win.  | 179/209 |
| - AB-11 Ext tape port                  | 45      |
| - Cable (2 Floppies & tape back up)    | 9       |
| - FC-10 Controller                     | 95      |
| - KE-09 Ext Kit w/o controller         | 75      |
| - TC-15 controller w. data compression | 195     |
| - Unix/ Xenix driver for DJ-10, 20     | 99      |
| PowerTape PT-25 2GB 300KB/s Int        | 965     |
| PowerTape PTE-25 Ext                   | 1095    |
| PowerTape PT-50 4GB 300KB/s Int        | 1525    |
| PowerTape PTE-50 Ext                   | 1655    |
| Trakker 250MB Ext (printer port)       | 339     |
| Trakker 120MB Ext (printer port)       | 299     |

**HILITE** (Archive s/w included)

|                                |     |
|--------------------------------|-----|
| California 250MB, 3.5", 1" ht. | 155 |
|--------------------------------|-----|

**MICRO SOLUTION**

|                          |     |
|--------------------------|-----|
| 250MB Ext (printer port) | 329 |
|--------------------------|-----|

**SUMMIT**

|                                     |     |
|-------------------------------------|-----|
| SE250 250MB w. Central Point Backup | 169 |
|-------------------------------------|-----|

**20. VGA CARDS**

|                                         |        |
|-----------------------------------------|--------|
| Hauptauge Win/TV-02 (122 channel tuner) | 450    |
| - Adapter Cable / S-Video Kit           | 52/85  |
| INTEL Smart Video Recorder              | 535    |
| Paradise Window Accel 31X 1MB           | 159    |
| Standard 24 VLB 1MB                     | 105    |
| Video Plus (video image grabber)        | 259    |
| WinVision (video capture)               | 165    |
| (All cards 1024x768 except as stated)   |        |
| CGA / MGP card (Monographic w. Printer) | 29     |
| ET4000 Tseng Lab 1MB ISA / VLB          | 89/119 |
| Oak087 Super VGA 512K                   | 52     |
| Oak077 Super VGA 1MB                    | 65     |

**AMI**

|                                |     |
|--------------------------------|-----|
| FastView EISA VGA Graphics 1MB | 249 |
| FastView P9000 VLB 2MB         | 395 |

**ATI**

|                                       |     |
|---------------------------------------|-----|
| VGA Stereo F/X 512K w. speakers       | 159 |
| Wonder XL 24 1MB, Hi-color, w. mouse  | 145 |
| Graphics Ultra Plus 2 (DRAM)          | 239 |
| Graphics Ultra Plus 2 (DRAM) w. mouse | 269 |
| Graphics Ultra Pro 2MB w. mouse       | 369 |
| Graphics Ultra Pro 2MB (VRAM) VLB     | 355 |
| Graphics Ultra Pro 2MB EISA           | 425 |



Beyond the Walls of Stars  
Business Background MPC + MAC  
CD Fun House (350 games) - DOS, WIN, MAC  
CD Game Pack II (10 games)  
Corel Artshow 3 (Book + CD) MPC  
ECO-Quest: The Search for Cetus  
Electronic Library of Art (Western Arts)  
Encyclopedia of ClipArt (Power Pack)  
Hound of Baskervilles  
Guinness Disc of Records 93 MPC  
Karaoke (w/o microphone)  
Laura Bow 2 - The Dagger of Amonra  
Laser Printer Companion  
Mammals (National Geographic)  
Mario is Missing + World Atlas  
Master Piece Library  
Mavis Beacon Teaches Typing MPC  
Mayo Clinic Family Health Book  
Night Owl 8 / Night Owl 9 (Shareware)  
PC SIG Library vol.12  
Publish It 2.0 - DOS Publisher's Paradise  
Talking Class Tales Talking Jungle Safari  
The Best of 20th Century The Family Doctor  
US Atlas w. Auto Map  
Where in the World is Carmen Sandiego  
Wing Commander w. Ultima 6

**GROUP D**  
Each ..... \$34.50

All American Sports  
Battle Chess MPC Bible Library (oem)  
Composer Quest MPC  
Dictionary of Living World MPC  
Dinosaur - The Multimedia Encyclopedia  
Electronic Home Library  
Encyclopedia (Grolier's DOS 5.01)  
Essential Home & Business Collection  
Fantasia Fonts & Sound  
Greatest Books Collection / for Win  
Languages of the World for Win  
Macromedia ACTION! WIN  
Monster Media 93  
Plant Doctor Pixel Garden  
Playing w. Lang. - Jap/Ger/Fren/Eng/Span  
Shareware Gold II Software Jukebox  
Stories of Murder, Mystery, Magic & Terror  
Timetable of Arts & Entertainment  
US History

**SPECIAL GROUP**  
Each ..... \$14.50

Audio I (shareware)  
Barney Bear Goes to Space  
Beauty and The Beast MPC  
Business Master (Shareware)  
Chestnut:  
- Bible & Religion - Clip Art Goliath  
- Colossal Cookbook  
- Death Star Arcade Battles  
- Dictionary & Language  
- Encyclopedia of Sound  
- Shareware Overload  
- Technotools (Programming)  
- The Complete Book Shop - World Traveler  
Education Master (Shareware)  
Kodak Photo CD Access v1.0 for Win (oem)  
Graphics I (shareware)  
Learning Adventure  
MPC Wizard (test & tune-up for Win)  
Peter and the Wolf MPC  
Rom Man Technologies: (w 3-D hologram)  
- Brain Drain - Futura  
- Let's Play - Mirror-Mirror  
- Oldies but Goodies - Variety Store  
Selectware

**BUNDLE**

5 PACK #1 ..... 135  
Compton's Multimedia Encyclopedia for WIN  
Guinness disk of Record MPC  
CD Game Pack II or any Game in group A & B  
Time Table of History - Science  
Wing Commander w. Ultima 6

**5 PACK #2 (DOS)** ..... 95

Atlas Pack (US & World)  
Reference Library The Animals  
Secret Weapons of the Luftwaffe  
Software Toolworks Encyclopedia 5.0

**6 PACK #3 (Windows)** ..... 99

CD Deluxe Pack (4 titles) MPC \$45  
- Chess Master 3000 + Mavis Teaches Typing +  
US Atlas 3.0 + World Atlas 3.2  
Grolier's New Multimedia Encyclopedia  
Wizard MPC

**6 PACK #4** ..... 95

Microsoft Bookshelf 93' Animals  
Sleeping Beauty Space Quest II  
Sound Library Selectware

**MULTIMEDIA BUNDLE #5 (w. 6 titles)** ..... 99

Microsoft Bookshelf for Windows 91-92'  
Microsoft Works for Windows  
Sherlock Holmes I  
Software Library (3 titles) \$49  
- Authorware Star  
- Macromind ACTION! - Mathematical Temptra

**OTHERS**

7th Guest DOS ..... 55  
A Line in the Sand ..... 35  
Adventures (1000 tours) ..... 39  
Amanda Story ..... 45

Amazing Universe PC & MAC ..... 49  
Anabel's Dream - Egypt ..... 59  
Arthur's Teacher Trouble w. box WIN ..... 45  
Battle Chess Multimedia - Enhanced ..... 49  
California Travel MPC ..... 39  
CD Source Book of American History ..... 79  
Composer Quest w. box MPC ..... 59  
Compton's Family Encyclopedia ..... 45  
Compton's Interactive Encyc. WIN ..... 245  
- upgrade ..... 99  
Compton's Multimedia Encyc. WIN oem ..... 65  
Countries of the World (oem) ..... (79)/269  
Day of the Tentacle - Maniac Mansion ..... 55  
Desktop Publisher's Dream Disk ..... 45  
Dinosaur Adventure DOS ..... 49  
Distant Sun for Windows ..... 79  
Famous Faces / Places MPC ..... 49/49  
Fitness Partner - MPC ..... 45  
Fractal Ecstasy (Images) ..... 39  
Global Explorer (DeLORME) MPC ..... 99  
Goldilocks and the 3 Bears (Eng/Fren/Span) ..... 45  
Grammy Awards ..... 45  
Graphics Works ..... 45  
Great Literature (1896 books) DOS & MAC ..... 49  
Great Wonders of the World DOS ..... 55  
Heart the Engine of Life (about human body) ..... 69  
History of the World (oem) ..... (59)/325  
Hong Kong at its Best ..... 25  
Indiana Jones - The Fate of Atlantis ..... 45  
JAZZ of Multimedia History MPC ..... 59  
Just Grandma and Me WIN ..... 39  
King's Quest VI / Upgrade ..... 49/35  
Kodak Photo CD Access DOS / WIN ..... 35  
Learn to Speak Spanish / Eng. / French ..... 65  
MacMillan Dictionary for Children (K-12 grade) ..... 45  
Microsoft CINEMANIA MPC ..... 55  
Microsoft Dinosaur ..... 57  
Microsoft ENCARTA MPC ..... 245  
Microsoft Golf ..... 48  
Microsoft Multimedia Beethoven 9th Symphony ..... 55  
Microsoft Multimedia Bookshelf 93 (oem 55)/125  
- upgrade to 1993 ..... 49  
Microsoft Multimedia Stravinsky ..... 57  
Microsoft Musical Instruments MPC ..... 55  
Microsoft Works MPC ..... 45  
Monarch Notes (over 2000 study guides) ..... 49  
Monster Disk II (2 shareware disk) ..... 49  
Multimedia Animals Encyclopedia MPC ..... 45/55  
Multimedia Encyc. (Grolier's WIN 1.5) ..... 55/225  
Nautilus BackPac for Win I / II ..... 49/49  
New York at its Best ..... 25  
Oxford English Reference Library OS/2 & DOS ..... 99  
PC Karaoke w. Microphone ..... 75  
Picture Atlas of the World ..... 99  
Phone Disk USA (Business) ..... 65  
Precision Mapping ..... 85  
Prescription Drugs ..... 39  
Pro Phone Business / (7 disk) 93 ..... 45/95  
Q & A v.4.0 ..... 45  
Return to the Moon ..... 49  
Scrabble Crossword Game (Deluxe) ..... 39  
Shareware Explorer - 4 CD set ..... 55  
Shareware Extravaganza - 4 CD set ..... 45  
Sherlock Holmes II ..... 49  
Space Quest IV - Roger Wilgo w. box ..... 45  
Street Atlas (DeLORME) ..... 99  
Talking Schoolhouse ..... 59  
The Family Doctor w. box MPC & MAC ..... 55  
Think and Talk Spanish (Fren/ Italian/ Ger) ..... 115  
Timetable of Business & Politics / w. box ..... 35/55  
Voyage to the Planets 1 / 2 / 3 ..... 49  
Voyage to the Stars 1 / 2 ..... 49  
Wing Commander II Deluxe ..... 59  
World Vista MPC ..... 45

**2. PC SOFTWARE**

\*(price) ..... special

**ADOBE**

Illustrator 4.0 WIN / w. Streamline ..... \*(359)/425  
PhotoShop 2.5 WIN ..... 515  
Streamline for WIN ..... \*(75)/125  
Plus Pack for Mac ..... 99  
Type Align ..... 59  
Type Cartridge 1/ Type Cartridge 2 ..... 79  
Type Manager for WIN 2.5 ..... 67  
Type Set 1/2/3 for WIN ..... 69/65/125  
Type Set: Overheads & Slides ..... 75  
Type Set: Spreadsheets & Graphs ..... 75

**AUTODESK**

AutoSketch 3.0 DOS ..... \*(99)/115  
AutoSketch for WIN ..... \*(155)/175  
Generic CADD 6.0 / v6.01 ..... \*(239)/285  
Generic 3D ..... 225  
Graphic Impact ..... 85  
Instant Artist / Home Series ..... 39/39  
Multimedia Explorer - CD version ..... 115

**BORLAND**

Brief 3.1 for DOS & OS/2 ..... 95  
C++ for OS/2 ..... \*(149)/349  
C++ Professional 3.1 for WIN ..... 319  
C++ 3.1 for WIN & Application Frameworks ..... 485  
dBase IV v2.0 for PC / upgrade ..... 485/99  
ObjectVision 2.1 / Pro 2.1 ..... 102/245  
Office Pack for WIN ..... 379  
- Upgrade ..... 285  
Paradox 4.0 DOS ..... 499

Paradox for WIN ..... \*(125)  
Quattro Pro 5.0 for WIN / DOS (new) ..... 50  
SuperPack (Quattro Pro & Paradox) WIN ..... 189  
Screenery (Windows wallpaper, screen saver) ..... 25  
The World of C++ (Video Training Kit) ..... 89  
Turbo C++ 3.0 for DOS / 3.1 for WIN ..... 75/105  
Turbo C++ Visual Edition for WIN ..... \*(79)  
Turbo Pascal 7.0 / 1.5 for WIN ..... 105/115/99

**CENTRAL POINT**

Anti-Virus 1.0 for DOS / 1.2 for WINDOWS ..... 15/39  
PC Tools 8.0 / 8.0A / 1.0 for WIN ..... 115/119

**INTUIT**

Quickken for DOS 6.0 / WIN 2.0 / MAC 4.0 ..... 45  
QuickBook / QuickPay (payroll) ..... 87/39  
QuickBook & QuickPay ..... 110

**LOTUS**

Improv - 12 data dimensions ..... \*(99)  
1-2-3 4.0 for WIN ..... \*(299)/325  
- Upgrade ..... 99  
1-2-3 Rel 3.1+ for DOS / Rel 3.4 single ..... 385  
1-2-3 for DOS upgrade ..... 99  
Ami Pro for WIN 3.01 ..... 239  
- upgrade / competitive upgrade ..... 65/99  
Freelance Graphic ..... 299  
- upgrade for DOS/WIN ..... 99  
Lotus Organizer ..... \*(99)  
Smart Suite (123 win, Ami, Freelance, ccMail) ..... 450

**MICROGRAFX**

Designer 4.0 ..... \*(425)/445  
- Competitive Upgrade ..... 195  
Graphics Works for WIN ..... \*(115)/175  
Picture Publisher 4.0 for WIN (new) ..... 399  
- Competitive Upgrade ..... 195  
Windows Draw 3.0 oem / reg. .... 49/69

**MICROSOFT**

DOS 3.3 / 4.01 / 6.0 (new) ..... 29/19/49  
- upgrade to 6.0 ..... \*(49)/79  
ACCESS ..... \*(89)/325  
- Upgrade to 1.1 ..... 15  
- Competitive upgrade ..... 149  
Entertainment Pack for WIN 1/2/3/4 ..... 28  
Excel 4.0 for WIN oem / reg. .... 195/285  
- upgrade ..... \*(109)/125  
Flight Simulator ..... 39  
FORTRAN 5.1 Compiler ..... 99  
Fox Pro 2.5 Distribution Kit DOS / WIN ..... 319  
Fox Pro 2.5 Single DOS / WIN ..... 315  
Fox Pro upgrade to 2.5 DOS / WIN ..... \*(99)  
Macro Assembler v6.1 (MASM) ..... 129  
Money for WIN 2.0 ..... \*(15)/49  
Multimedia Viewer - CD ..... 315  
Office for WIN 3.0 oem / reg. .... 435/469  
Office Professional for WIN ..... 585  
PC Mail Server for DOS & WIN (10-user) ..... 435  
Power Point for WIN / Upgrade ..... 299/125  
Profit for WIN ..... 129  
Project 3.0 for WIN / Upgrade ..... 419/145  
Publisher 2.0 for WIN (new) ..... \*(95)  
Sound System for WIN + Windows 3.1 ..... 185  
Sound System for WIN + 2 Games ..... 199  
Test 2.0 for WIN (new) / Upgrade ..... 315/99  
True Type Font Pack 1/ Pack 2 (HP printers) ..... 49  
Video for WIN (CD & floppy) ..... 129  
Visual Basic 3.0 for WIN - standard ..... 129  
Visual Basic Professional 3.0 for WIN ..... \*(249)/315  
- Upgrade fr standard ver to prof. ver 3.0 ..... 145  
- upgrade / competitive upgrade ..... 99/195  
Visual C++ (standard) ..... 129  
Visual C++ Professional ..... 309  
- upgrade / competitive upgrade ..... 135/189  
Windows 3.1 / upgrade ..... 65/49  
Windows 3.1 Device Driver Development Kit ..... 315  
Windows NT 3.1 ..... 319  
- Upgrade special ..... 269  
Windows Printing System ..... 135  
Windows for Workgroups (w. Win 3.1) ..... 165  
- Workgroups Add on / 5-user ..... 69/269  
Windows for Workgroups Add on Starter Kit ..... 299  
- Workgroups Add on 1 User Kit ..... 149  
Word 6.0 DOS / Upgrade ..... 315/99  
Word 2.0 for Windows oem / reg. .... 195/285  
- Word for Windows upgrade ..... 125  
Works 3.0 (new) ..... 99  
Works for WIN 2.0 ..... \*(99)/125  
- competitive upgrade ..... 79

**QUARTERDECK**

DesqView 286 ..... 59  
DesqView 386 v2.4 ..... 129  
DesqView / X v1.1 ..... 165  
DesqView / X Network Manager (TCP/IP) ..... 129  
Qemm 386 v7.0 / upgrade ..... 62/43  
QEMM 6.0 - Game pack ..... 85

**SANTA CRUZ OPERATION - SCO ... call****SYMANTEC**

Norton  
- Anti-Virus 2.1 (new) ..... 79  
- Backup v1.2 / v2.2 ..... 49/99  
- Desktop 2.2 for WIN ..... \*(99)/105  
- Commander 4.0 ..... 69  
- Q & A Write (Word Processing) ..... 49  
- Speed Cache + (Speeds WIN, DOS & CD) ..... 69  
- Utilities 7.0 ..... \*(99)/109  
ACT! 2.1 / 2 user / 1.1 for WIN ..... 225/335/235  
On Target for WIN ..... 89  
PC Anywhere 4.5 Remote and Host/ Win ..... 115/119  
PC Anywhere Lan Complete ..... 385  
Q & A 4.0 / 1.0 for Win ..... 239/165

Time Line 5.0 / for Win ..... 445/445  
Time Line Lan Pack ..... 379

**WORDPERFECT**

PlanPerfect ..... \*(195)/255  
WordPerfect 5.2 for WIN ..... 259  
- upgrade Kit from 5.1 to 5.2 for WIN ..... 39  
- upgrade to WIN 5.2 from DOS ..... 99  
- competitive trade up 5.2 for WIN ..... 105  
WordPerfect 5.2 for OS/2 / Upgrade ..... 279/105  
WordPerfect 6.0 DOS oem / reg. .... 225/269  
- Upgrade to 6.0 ..... 99  
WP Office 4.0 for WIN - server / client ..... 175/289

**OTHERS**

3-D Charts to go ..... \*(35)  
After Dark screen saver for WIN ..... 27  
- More After Dark ..... 27  
ALDUS  
- Freehand 3.1 for WIN ..... 379  
- PageMaker 5.0 for WIN ..... \*(499)/525  
- Persuasion 2.1 for WIN ..... 325  
- Photostyle 1.1 for WIN ..... 495  
Approach 2.0 for WIN ..... \*(99)/239  
Asymetrix Multimedia Make Your Point ..... 45  
Automap (road atlas) / for WIN ..... 49/59  
Bitstream True Type Font Pack ..... \*(19)/35  
Body Works ..... 39  
Boot Con (solve compatibility problems) ..... 49  
By Design for WIN ..... 59  
CALERA Wordscan 1.1 / plus ..... 182/425  
Carbon Copy 6.1 Guest & Host ..... 112  
Carbon Copy 2.0 for WIN ..... 115  
C - It 3.0 (for C/C++) ..... 99  
ClarisWorks for Windows ..... 99  
Clipper 5.2 ..... 479  
- upgrade / competitive upgrade ..... 115/145  
Check-It Plus 3.0 ..... 85  
Check-It Pro vol.1 / vol.1 & 2 ..... 59/85  
Corel Draw 3.0 ..... \*(135)  
Corel Draw 4.0 / CD version ..... 385/365  
- Upgrade / CD version ..... 215/199  
Da VINCE eMail 2.0, 10 user ..... \*(295)/485  
Dash Board for WIN (HP) ..... 45  
Direct Access 5.1 / for WIN (new) ..... 63/45  
Display Faces ..... 77  
Drive Rocket ..... 29  
EasyDOS (menu for WIN) ..... 25  
Eclipse Fax 1.1 for WIN / w. OCR ..... 69/85  
Energizer Bunny screen saver ..... 15  
Fastback Plus 6.0 / 3.1 for WIN ..... 99/107  
Faxit DOS & WIN ..... 69  
Fax Master for WIN ..... \*(79)  
File Maker Pro 2.0 for WIN ..... \*(125)/259  
Font Minder for WIN ..... 55  
Fractal Design Painter 2.0 WIN ..... 255  
Frame Maker 3.0 ..... \*(299)/485  
- competitive upgrade ..... 299  
Full Motion Video MATINEE screen saver ..... 29  
Geoworks Pro ..... 119  
GDI: Flash Form / Wind Form ..... 55/69  
Grammatik V for DOS / WIN ..... 57/59  
Hardvard Graphics 2.0 WIN/ Upgrade ..... \*(265)/89  
Hardvard Graphics 3.06 DOS ..... 375  
Hijack 2.1 / 2.0 for WIN ..... 99/89  
Hollywood for WIN ..... \*(99)  
IBM DOS 5.0 ..... 39  
IBM OS/2 2.1 / CD version ..... 149/135  
- upgrade / CD version ..... 99/85  
Johnny Castaway screen antics ..... 19  
LapLink V / Upgrade ..... 105/55  
LapLink V Network ..... 145  
Mac-In-DOS for WIN ..... 99  
Mac Print ..... 65  
More Fonts ..... 77  
My Product Invoice ..... 45  
Omni Page Professional WIN 2.1 ..... \*(499)/599  
Packoli 2000 ..... \*(15)  
PC Swimsuit Calendar DOS / WIN ..... 25/27  
Peach Tree Accounting 2.0 for WIN ..... 115  
Power Search (File Manager) ..... 39  
PrintShop Deluxe 1.2 for Win / Business ..... 49/27  
Procomm Plus 2.1 / 1.02 for WIN ..... 69/95  
Professional Draw ..... \*(199)/269  
QA Plus 4.7 / for WIN ..... 89  
Quark X Press 3.1 for WIN ..... 569  
Right Writer 5.0 / for WIN ..... 35  
SpinRite 3.1 ..... 79  
Stacker 3.1 / Upgrade ..... 95/55  
Stacker for OS/2 ..... 125  
Star Trek screen saver ..... 35  
Super PC-Kwik ..... 59  
Superstor 2X / Pro 2X ..... 59/79  
Time Slip v5.0 ..... 189  
This Is My Computer ..... 8.50  
Turbo CAD v3.0 w. free 500 drawing symbols ..... 85  
Uninstaller ..... 45  
UpFront for WIN ..... \*(149)/299  
Ventura Publisher 4.1 (new) ..... 499  
- Ventura Publisher 3.0 + upgrade 4.0 ..... 299  
- Ventura Publisher 4.1 Education special ..... 199  
Vista Pro v 3.0 ..... 69  
VISIO for WIN (shapeware) ..... 199  
Wave for WIN ..... 75  
Winfax Pro 3.0 (new) ..... 79  
WinSense (Windows Optimizer) ..... 49  
XTree Gold 2.5 ..... 89  
XTree for WIN 1.5 ..... 65  
Educational Software & Games (on sale) ■



# HD COMPUTER

**EDITOR'S CHOICE NO.1 BYTE JUNE 1993**



**BEST VALUE CAD AND GRAPHICS**



**BEST VALUE WINDOWS SYSTEM**



**BEST VALUE UNIX SYSTEM**

**EDITORS & BUSINESS  
BUYERS AGREE!**

**HD IS YOUR SOLUTIONS SUPERSTORE!**

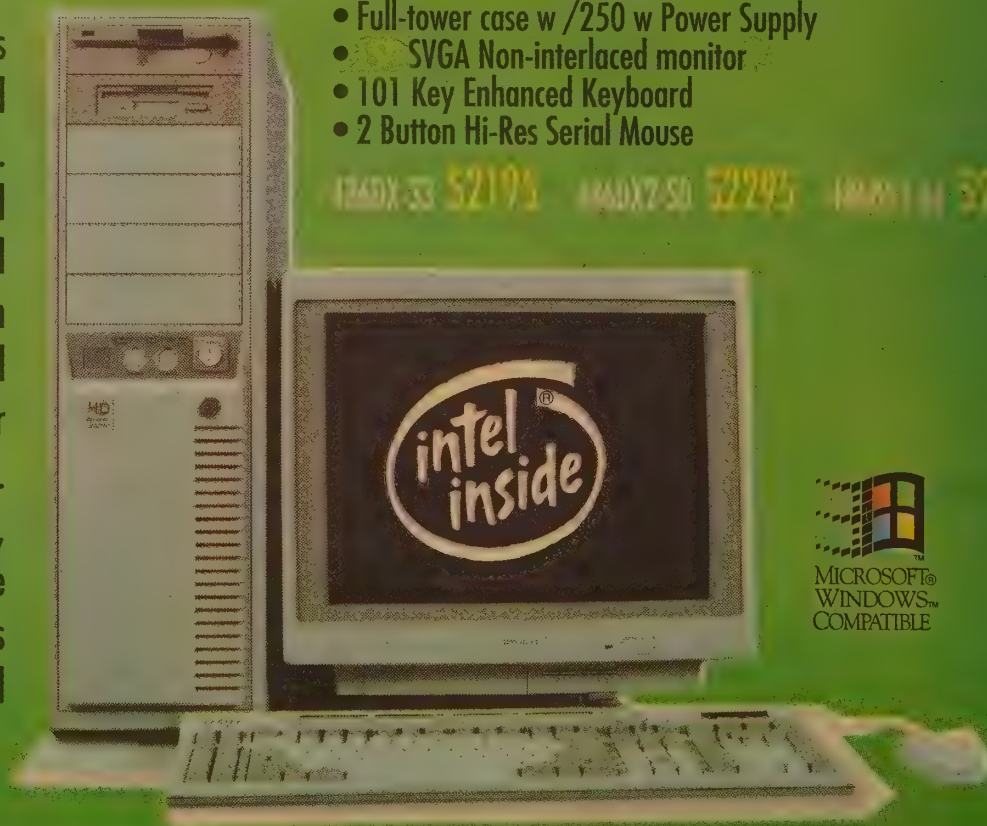
**BYTE'S June 1993 Best Low Cost CAD,  
WINDOWS, UNIX System...the HD VLB66**

**HD'S** 486DX2/66 system won hands down for Best Low Cost CAD, WINDOWS and UNIX system. It beat out, Easterntech, Acma..... That's no surprise, considering it's solid performance, flexible expansion options and low price. Our high resolution 14" non interlaced display and Genoa Windows VGA card featuring the Cirrus Logic chip set means faster screen redraws and more efficient work for you. All this plus one year parts & lifetime labor, lifetime tech support and optional on-site service are just a few reasons why HD's 486DX2/66 is the system for the '90s and beyond!

## BEST VALUE SYSTEMS

- ZIF Socket for Upgrade to Intel P24T SIS Chipset
- 256K High Speed Write Back Cache
- 8MB RAM
- 1.2MB and 1.44MB Floppy Disk Drive
- 345MB SCSI Hard Disk
- 32 Bit VLB SCSI II Controller ( Support 7 Hard Disks, Drivers for OS/2, XENIX, UNIX, NETWOLD Etc.)
- 2 Serial, 1 parallel, and 1 game port
- Diamond Stealth 24 VLB/1MB
- Full-tower case w /250 w Power Supply
- SVGA Non-interlaced monitor
- 101 Key Enhanced Keyboard
- 2 Button Hi-Res Serial Mouse

486DX-33 \$2195 486DX2-50 \$2295 486DX2-66 \$2395





# HD COMPUTER UNBEATABLE SYSTEM VALUES



**Free On-Site Service  
(Bay Area only)**

**Free Software Option:**

1. MS DOS 6.0  
(OEM) (with system only)
  2. MS WINDOWS 3.1  
(OEM) (with system only)
  3. PFS:Windows Works
  4. PFS:Publisher
  5. PFS:Business Plan
  6. PFS:First Choice/DOS
- One for each system.

## VESA LOCAL BUS VL-B 486SX

- ZIF Socket for Easy Upgrade to Intel 486 & P24-T
  - 128K Cache Expandable to 256KB
  - 4MB RAM Expandable to 32MB
  - 1.2MB and 1.44MB Floppy Disk Drive
  - 130MB IDE Hard Disk
  - IDE 2H/2F Controller
  - 2 Serial 1 Parallel 1 Game Port
  - 101-key enhanced keyboard, MITSUMI
  - Mini-tower case w/ 200W power supply
  - 14" SVGA Non-interlaced monitor 0.28 dpi
  - VL-B Graphic Accelerator w/1MB (Expandable to 2MB) Max 1280x1024 16.7 Million Colors. Driver Support Windows 3.1 AutoCAD R.12 OS/2 V.2.0
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- 486SX-25MHz **\$1245**
- 486SX-33MHz **\$1255**

## VESA LOCAL BUS BEST BUY

- ZIF Socket for Easy Upgrade to Intel 486 & P24-T
  - 128K Cache Expandable to 256KB
  - 4MB RAM Expandable to 32MB
  - 1.2MB and 1.44MB Floppy Disk Drive
  - 245MB IDE Hard Disk, MAXTOR
  - IDE 2H/2F Controller
  - 2 Serial 1 Parallel 1 Game Port
  - 101-key enhanced keyboard, MITSUMI
  - Mini-tower case w/ 200W power supply
  - 14" SVGA Non-interlaced monitor .28 dpi
  - VL-B Graphic Accelerator w/1MB (Expandable to 2MB) Max 1280x1024 16.7 Million Colors. Driver Support Windows 3.1 AutoCAD R.12 OS/2 V.2.0
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- 486DX-33 **\$1045** 486DX2-66 **\$1045**
- 486DX2-50 **\$1045**

## VLB w/ANTI-UIRUS PROFESSIONAL

- ZIF Socket for Easy Upgrade to Intel 486 & P24-T
  - 128K Cache Expandable to 256KB
  - 8MB RAM Expandable to 32MB
  - 1.2MB and 1.44MB Floppy Disk Drive
  - 340MB IDE Hard Disk
  - 32 Bit VLB IDE Controller w/ANTI-UIRUS
  - 2 Serial 1 Parallel 1 Game Port
  - 124-key Focus 9000 keyboard
  - Mini-tower case w/ 200W power supply
  - 15" Viewsonic 15 SVGA HI monitor (1280 x 1024 0.28 dpi)
  - VL-B Graphic Accelerator w/1MB (Expandable to 2MB) Max 1280x1024 16.7 Million Colors. Driver Support Windows 3.1 AutoCAD R.12 OS/2 V.2.0
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- 486DX-33 **\$1095** 486DX2-66 **\$1295**
- 486DX2-50 **\$1195**

## System Below \$1,000 HD 386

- 4MB RAM Expandable to 32MB
  - 1.44MB Floppy Disk Drive
  - 130MB Hard Disk
  - 1.1 Interleave 2 FL/2HD Disk Controller
  - 2 Serial 1 Parallel 1 Game Port
  - 101-key enhanced keyboard
  - Mini-tower case w/ 200W power supply
  - 14" SVGA Color Monitor 0.39dpi
  - 16 Bit SVGA CARD/1MB
  - 2 button Hi-Re serial Mouse
- 386SX-33MHz **\$995**
- 386DX-33MHz w/64K Cache **\$995**
- 386DX-40MHz w/64K Cache **\$995**

## Windows Accelerator HD486-ISA

- 64K Cache Expandable to 256KB
  - 4MB RAM Expandable to 32MB
  - 1.2MB and 1.44MB Floppy Disk Drive
  - 170MB IDE Hard Disk
  - 1:1 Interleave 2 FL/2HD Disk Controller
  - 2 Serial 1 Parallel 1 Game Port
  - 101-key enhanced keyboard, MITSUMI
  - Mini-Tower Case w/ 200W Power supply
  - 14" SVGA Non-Interlaced Monitor .28 dpi
  - Windows Accelerator Card w/ 1MB
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- DX2-66 **\$1045** DX-33 **\$1045**
- DX-50 **\$1045** SX-33 **\$1045**
- DX2-50 **\$1045** SX-25 **\$1045**

## EISA VESA

- Nice Main Board Made in USA
  - ZIF Socket for Upg. to any Intel 486& P24-T
  - 256K Cache Expandable to 1MB
  - 4MB RAM Expandable to 128MB
  - 1.2MB and 1.44 MB Floppy Disk Drive
  - 340 MB SCSI Hard Disk
  - 32 BIT EISA SCSI Controller
  - 2 Serial 1 Parallel 1 Game Port
  - 101-key Enhanced Keyboard, KEYTRONIC
  - Mid Tower Case w/ 230W Power Supply
  - View sonic V6E Non-interlaced monitor, 28 dpi
  - ET-4000/W32 VL-B Graphic Accelerator w/1MB
  - Max 1280 x 1024 16.7 million colors Drivers
  - Support Windows 3.1 Auto CAD R.12 OS/2 V.2.0
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- DX2-66 **\$1195** DX2-50 **\$1195**
- DX-50 **\$1195** DX-33 **\$1195**

## Top Performance HD EISA

- Nice Main Board Made in USA
  - 256K Cache Expandable to 1MB
  - 1.2MB and 1.44MB Floppy Disk Drive
  - 525MB SCSI Hard Disk, QUANTUM
  - 32 Bit EISA SCSI Controller
  - 2 Serial 1 Parallel 1 Game Port
  - Full-tower case w/ 250W power supply
  - View sonic V6E Non-interlaced monitor .28 dpi
  - Orchid Pro Designer IIs 32bit EISA SVGA/1MB
  - 2 button Hi-Re serial Mouse
- Free Software Option**
- 486DX2-66 **\$1295** 486DX50 **\$1295**
- 486DX2-50 **\$1295** 486DX33 **\$1295**

" brand name components, plentiful room for expansion, ample setup options, and generous service policies are the hallmarks of this machine"

**PC Sources**

" definitely not another 'run of the mill' machine" "more experienced user searching for top performance might want to consider HD Computer..."

**COMPUTER  
SHOPPER**

**Computer Shopper**

SUNNYVALE / CUMM - 6000PAI VERNAM - 10005 - 6000 SERRITO (DRAINING TIME)

SUNNYVALE TEL: (408) 730-9443

EL CERRITO TEL: (510) 528-5753

SACRAMENTO TEL: (916) 483-4276

1196 KERN AVE., SUNNYVALE, CA 94086

10005 SAN PABLO AVE., EL CERRITO, CA 94530

2530 WATT AVE., SACRAMENTO, CA 95821

TERMS AND CONDITIONS FOR HD SYSTEMS ONLY: • 30 DAY MONEY BACK GUARANTEE, NO RESTOCKING FEE • 1 YEAR PARTS LIFE TIME TECH SUPPORT WARRANTY • TOLL FREE TECHNICAL SUPPORT • MAJOR CREDIT CARDS ACCEPTED • NO SURCHARGE FOR VISA, MC, AE, AND DISCOVER CARDS • QUALITY PO'S ACCEPTED FROM ACADEMIC, CORPORATE AND PUBLIC INSTITUTIONS • APO'S WELCOME • SHIPPING CHARGE NOT REFUNDABLE • RETURN SHIPMENTS MUST BE INSURED, PREPAID AND BEAR AN RMA# ON THE SHIPPING LABEL • PRICE DOES NOT INCLUDE SHIPPING • PRICE AND CONFIGURATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE • ALLOW 14 DAYS TO PROCESS REFUND.

• NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.



# HD COMPUTER



## Twinhead Notebook

### Twinhead Powerful Mono Notebook

- INTEL 486DX CPU
- 4MB RAM Expandable to 20MB
- 1.44MB Built-In Floppy Disk Drive
- One Serial Port, One Keyboard/Mouse Port
- 84 Keys Keyboard with 12 Function Keys
- MONOCHROME, 64 Shade Sidelit Display
- MS DOS 6.0, MS WINDOWS 3.1
- Physical Dimensions 8.5" x 11" x 1.8"
- Weight with Battery 5.8 LBS

486DX-33 with 130MB Hard Disk Only \$2089  
with 200MB Hard Disk Only \$2199

486DX2-66 with 200MB Hard Disk Only \$2689

### Twinhead Brilliant Color Notebook

- INTEL 486DX CPU
- 4MB RAM Expandable to 20MB
- 1.44MB Built-In Floppy Disk Drive
- One Serial Port, One Keyboard/Mouse Port
- 84 Keys Keyboard with 12 Function Keys
- 256 Color Display, Active Color Matrix
- Video Card w/512K RAM
- MS DOS 6.0, MS WINDOWS 3.1
- Physical Dimensions 8.5" x 11" x 1.8"
- Weight with Battery 6.3 LBS

486DX-33 with 130MB Hard Disk Only \$3089  
with 200MB Hard Disk Only \$3299

486DX2-66 with 200MB Hard Disk Only \$4289

### Twinhead 4 Pounds Powerful Subnote

- 2MB RAM Expandable to 8MB
- 1.44MB External Floppy Disk Drive
- 85MB IDE Hard Disk
- One Serial / Parallel Port
- 79 Keys Keyboard
- 64 Gray Shades VGA Display
- PCMCIA Slot
- Built-In 2-Button Trackball
- MS DOS 6.0, MS WINDOWS 3.1
- Physical Dimensions 7.1" x 10" x 1.6"
- Weight with Battery 4LBS

486SLC33

| AMT                                         |        |
|---------------------------------------------|--------|
| Enterprise III EISA/VL-B 486DX2-66/256K/CPU | \$1450 |
| Enterprise III EISA/VL-B 486DX-50/256K/CPU  | \$1300 |
| Enterprise III EISA/VL-B 486DX-33/256K/CPU  | \$1150 |
| Super Voyager 486DX2-66/VL-B/256K/CPU       | \$1200 |
| Super Voyager 486DX33/VL-B/256K/CPU         | \$995  |
| MICRONICS                                   |        |
| 486DX-33/256K/CPU ISA                       | \$690  |
| 486DX-50/256K/CPU ISA                       | \$990  |
| 486DX2-66/256K/CPU ISA                      | Call   |
| NX-30 486DX-33/256K/CPU VL-B                | \$850  |
| NX-30 486DX2-50/256K/CPU VL-B               | \$950  |
| NX-30 486DX2-66/256K/CPU VL-B               | \$1190 |
| E-3 486DX2-66/256K/CPU EISA                 | \$1450 |
| NICE (Made in U.S.A.)                       |        |
| ZIF 486DX/256K VL-B                         | \$270  |
| ZIF EISA VESA VL-B 486DX/256K               | \$300  |
| Super EISA VESA VL-B 486DX/256K             | \$450  |
| EISA 486DX/256K/8 EISA slots                | \$400  |
| ORCHID                                      |        |
| 486DX33/DX2 50/DX2 66/256K VL-B             | \$350  |

| Quantum                          |       |
|----------------------------------|-------|
| ELSI27A 127MB 17MS               | \$185 |
| ELSI70A 170 MB 17MS              | \$205 |
| LPS 240A 240MB IDE               | \$265 |
| LPS 240S 240MB SCSI              | \$265 |
| LPS 525MB SCSI                   | \$645 |
| CP 30104H 120MB 19MS             | \$185 |
| CP30174E 170MB 17MS              | \$205 |
| CP30254E 250MB 14MS              | \$245 |
| CP 340MB IDE                     | \$365 |
| CP 540MB IDE                     | \$645 |
| CP 540MB SCSI                    | \$645 |
| M2624 520MB IDE 14MS             | \$695 |
| M2624 520MB SCSI 11MS            | \$695 |
| Western Digital AC2250 250MB IDE | \$245 |
| Western Digital AC2340 340MB IDE | \$345 |
| Western Digital AC2340 420MB IDE | \$455 |

| Video Cards                               |       |
|-------------------------------------------|-------|
| ATI Graphic Ultra Plus/1MB and Mouse      | \$375 |
| ATI Graphic Ultra Pro/2MB VRAM            | \$525 |
| ATI Graphic Ultra Pro VL-B/2MB VRAM       | \$375 |
| ATI Graphic Ultra Pro EISA/ 2MB VRAM      | \$395 |
| Diamond Speed Star 24X/1MB Hi-Color       | \$175 |
| Diamond Stealth 24/1MB                    | \$185 |
| Diamond Stealth 24 VL-B/1MB               | \$210 |
| Diamond Stealth Pro VL-B/2MB              | \$395 |
| Diamond Viper VL-B/2MB                    | \$419 |
| Orchid Fahrenheit 1280/1MB                | \$165 |
| Orchid Fahrenheit 24-bit/1MB              | \$175 |
| Orchid Pro Designer IIs/1MB               | \$135 |
| Orchid Pro Designer IIs EISA/1MB          | \$175 |
| Orchid Fahrenheit VL-B/1MB                | \$210 |
| Orchid P9000/3MB                          | \$425 |
| Cirrus Logic VL-B Graphic Accelerator/1MB | \$135 |
| Cirrus Logic VL-B Graphic Accelerator/2MB | \$165 |

| Modems                                         |       |
|------------------------------------------------|-------|
| ET-4000/w32 Graphic Accelerator/1MB            | \$175 |
| Windows Accelerator Card/1MB                   | \$85  |
| 16-bit SVGA Card/1MB                           | \$80  |
| 16-bit SVGA card/512K                          | \$65  |
| 16-bit SVGA card/256K                          | \$50  |
| M.G.P. card                                    | \$20  |
| Fax Modems                                     |       |
| Zoltrix 2400 Modem                             | \$45  |
| Zoltrix 9600/2400 Fax Modem                    | \$75  |
| Zoltrix 9600/2400 Fax Modem for Windows        | \$95  |
| Zoltrix 14400/14400 Fax Modem                  | \$195 |
| Zoltrix 14400/14400 Fax Modem for Windows      | \$215 |
| Intel Satisfaction 200 96/24 Fax Modem         | \$315 |
| Intel Satisfaction 400 96/24 Fax modem         | \$415 |
| Monitors                                       |       |
| 14" VGA Mono Monitor                           | \$120 |
| 14" VGA Monitor .39 dpi (1024x768)             | \$225 |
| 14" SVGA Monitor .28 dpi (1024x768)            | \$275 |
| 14" SVGA non-interlaced monitor .28 (1024x768) | \$295 |
| Flat Panel Monitors                            |       |
| MAG                                            |       |
| Low Radiation 15" Flat 1280x1024 .28 NI        | \$565 |
| MX17F 17" Flat 1280x1024 .28 NI                | call  |
| Viewsonic                                      |       |
| Viewsonic SE 14" 1024x768.28 NI                | \$415 |
| Viewsonic 6E 14" 1024x768.28 NI                | \$335 |
| SONY                                           |       |
| 1430S 14" 1024x768.25 NI                       | \$645 |
| 1604S 17" 1024x768.25 NI                       | call  |
| 2036S 20" 1280x1024.30 NI                      | call  |
| NEC                                            |       |
| 3 FGE 15" 1024x768.28                          | call  |
| 4FGE 15" Flat 1024x768.28 NI                   | call  |
| 5FG 17" Flat 1280x1024.28 NI                   | call  |
| 6FG 21" Flat 1280x1024.28                      | call  |

#### TERMS AND CONDITIONS FOR PARTS ONLY:

• 30 DAY MONEY BACK GUARANTEE • 1 YEAR PARTS WARRANTY • MAJOR CREDIT CARDS ACCEPTED • NO SURCHARGE FOR VISA, MC, AE, AND DISCOVER CARDS • QUALITY PO'S ACCEPTED FROM ACADEMIC, CORPORATE AND PUBLIC INSTITUTIONS • APO'S WELCOME • SHIPPING CHARGE NOT REFUNDABLE • RETURN SHIPMENTS MUST BE INSURED, PREPAID AND BEAR AN RMA# ON THE SHIPPING LABEL • PRICE DOES NOT INCLUDE SHIPPING • PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE • COMPONENT WARRANTIES OFFERS AND CLAIMS ARE HANDLED BY THE MANUFACTURER • COMPONENTS COMPATIBILITY IS NOT GUARANTEED • NO RETURN ON USED ITEMS • ALL OPEN RETURNS ARE SUBJECT TO 15% RESTOCKING FEE • NO EXCHANGES OR REFUNDS ON CD TITLES. DAMAGED CD'S WILL BE REPLACED WITH THE SAME TITLE ONLY... • ALLOW 14 DAYS TO PROCESS FOR REFUND. • WE ARE NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.



SALE HOURS: 9:30AM - 6:30PM WEEKDAYS - 10AM - 4PM SATURDAY (PARKING TIME)

SUNNYVALE Tel: (408) 720-0495

1196 KERN AVE., SUNNYVALE, CA 94086

EL CERRITO Tel: (510) 528-0753

10005 SAN PABLO AVE., EL CERRITO, CA 94530

SACRAMENTO Tel: (916) 453-4278

2530 WATT AVE., SACRAMENTO, CA 95821





## COMPUTER

### UNBEATABLE CD-ROM TITLES PRICE

|        |                               |         |
|--------|-------------------------------|---------|
| BUS001 | American Business Phone Book  | \$24.99 |
| BUS002 | Business and Economic Atlas   | \$29.99 |
| BUS003 | Guinness Disk of Records, MPC | \$24.99 |
| BUS004 | Jets and Props                | \$24.99 |
| BUS005 | Lotus 123 V3.1                | \$99.99 |
| BUS006 | Office & Home                 | \$24.99 |
| BUS007 | Media Clips - 4 pack          | \$64.99 |
| BUS008 | Microsoft Works MPC           | \$64.99 |
| BUS009 | Ocean Digital Imagery Vol. 1  | \$34.99 |
| BUS010 | Publish It 2.0 DOS            | \$34.99 |

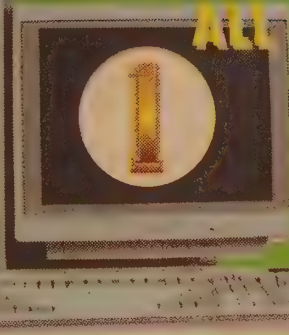
|        |                                 |         |
|--------|---------------------------------|---------|
| EDU001 | Animals V1.0 Software Toolworks | \$29.99 |
| EDU002 | Britannica Family Choice        | \$29.99 |
| EDU003 | Desert Storm MPC                | \$24.99 |
| EDU004 | Dictionary of Living World      | \$24.95 |
| EDU005 | Family Education Collection     | \$29.99 |
| EDU006 | Mixed-up Mother Goose MPC, DOS  | \$24.99 |
| EDU007 | PC Graphic & Sound Demo         | \$23.99 |
| EDU008 | Playing w/ Language - English   | \$34.99 |
| EDU009 | Playing w/ Language - French    | \$34.99 |
| EDU010 | Playing w/ Language - German    | \$34.99 |
| EDU011 | Playing w/ Language - Japanese  | \$34.99 |
| EDU012 | Playing w/ Language - Spanish   | \$34.99 |
| EDU013 | Presidents                      | \$99.99 |
| EDU014 | Shakespeare                     | \$34.99 |
| EDU015 | Time Table of History           | \$24.99 |
| EDU016 | US History                      | \$39.99 |
| EDU017 | USA Wars: Civil War             | \$44.99 |
| EDU018 | USA Wars: Korea                 | \$44.99 |
| EDU019 | USA Wars: Vietnam (DOS)         | \$44.99 |
| EDU020 | USA Wars: World War II          | \$44.99 |
| EDU021 | Whale of Tale                   | \$79.99 |
| EDU022 | Electronic Library of Art       | \$24.99 |
| EDU023 | Midi Music Shop                 | \$29.99 |

|        |                                |         |
|--------|--------------------------------|---------|
| REF001 | Author's Teacher Trouble       | \$34.99 |
| REF002 | Comptons MPC Encyclopedia      | \$99.99 |
| REF003 | Family Doctor                  | \$34.99 |
| REF004 | The World of Flight            | \$34.99 |
| REF005 | MacMillans Children Dictionary | \$39.99 |
| REF006 | Mayo Clinic Family Health Book | \$34.99 |
| REF007 | Reference Library              | \$34.99 |
| REF008 | Toolworks Encyclopedia         | \$69.99 |
| REF009 | Clipart Heaven                 | \$34.99 |
| REF010 | KODAK Photo CD                 | \$34.99 |
| REF011 | PC-SIG 12th Edition            | \$23.99 |
| REF012 | Mavis Teaches Typing MPC       | \$29.99 |
| REF013 | Microsoft Bookshelf            | \$69.99 |
| REF014 | Microsoft Works mpc            | \$69.99 |

|         |                               |         |
|---------|-------------------------------|---------|
| ENT001  | Amanda Stories                | \$44.99 |
| ENT002  | Adventure of Willy Beamish    |         |
| ENT003  | Annabel's Dreams Egypt        | \$69.99 |
| ENT004  | Mirror Mirror                 | \$34.99 |
| ENT005  | Barney Bear                   | \$34.99 |
| ENT006  | Mantis Experimental Fighter   | \$39.99 |
| ENT007  | Battle Chess Enhanced         | \$29.99 |
| ENT008  | Beauty and Beast              | \$24.99 |
| ENT009  | Carmen San Diego              | \$29.99 |
| ENT010  | CD Game Pack II               | \$29.99 |
| ENT011  | Let's Play                    | \$34.99 |
| ENT012  | Chess Master 3000 MPC         | \$24.99 |
| ENT013  | CIA World Fact Book           | \$24.99 |
| ENT014  | Composer Quest MPC            | \$59.99 |
| ENT015  | Dinosaur Adventure            | \$34.99 |
| ENT016  | Jones in Fast Lane MPC        | \$24.99 |
| ENT 017 | King's Quest V                | \$29.99 |
| ENT018  | Library of Future 1st         | \$54.99 |
| ENT019  | LOCM from Lucas MPC           | \$29.99 |
| ENT020  | Macromedia Action for Windows | \$39.99 |
| ENT022  | MIDI Music Shop               | \$31.99 |
| ENT023  | Money Island                  | \$29.99 |
| ENT024  | Peter and the Wolf            | \$24.99 |
| ENT025  | Oldies But Goodies            | \$34.99 |
| ENT026  | Brain Drain                   | \$34.99 |
| ENT027  | Secret Weapons of LuftWaffe   | \$34.99 |
| ENT028  | Sherlock Holmes               | \$29.99 |
| ENT029  | So Much Shareware I           | \$24.99 |
| ENT030  | So Much Shareware II          | \$24.99 |
| ENT031  | Sound Library                 | \$29.99 |
| ENT032  | Space Adventure               | \$34.99 |
| ENT033  | Space Quest IV: Roger Wilco   | \$29.99 |
| ENT034  | Sport's Best                  | \$24.99 |
| ENT035  | Stellar 7 DOS                 | \$24.99 |
| ENT036  | Tempra Access Photo CD        | \$29.99 |
| ENT037  | Futura                        | \$24.99 |
| ENT038  | Total Baseball                | \$39.99 |
| ENT039  | Wild Places                   | \$24.99 |
| ENT040  | Wing Command & Ultima VI DOS  | \$29.99 |
| ENT 041 | Winzard MPC                   | \$24.99 |

|        |                             |         |
|--------|-----------------------------|---------|
| TRV001 | Great Cities - Vol 1        | \$24.95 |
| TRV002 | Great Cities - Vol 2        | \$24.95 |
| TRV003 | National Geographic Mammals | \$34.95 |
| TRV004 | US Atlas/World Atlas        | \$29.99 |
| TRV005 | US Atlas & Auto Map         | \$39.99 |
| TRV006 | World Atlas MPC             | \$29.99 |
| TRV007 | World View                  | \$24.99 |
| TRV008 | National Park               | \$34.99 |

When You Purchase ANY  
MULTIMEDIA PACKAGE,  
You Can Get 10% OFF  
ALL CD-TITLES



### HD486 ISA Multimedia

- 64K Cache Expandable to 256KB
- 4MB RAM Expandable to 32MB
- 1.44MB Floppy Disk Drive
- CD ROM Drive
- 130MB IDE Hard Disk
- 1:1 Interleave 2 FL/2HD Disk Controller
- 2 Serial, 1 Parallel, 1 Game Port
- 101-key Enhanced Keyboard, MITSUMI
- Mini-Tower case w/ 200W Power supply
- 14" SVGA Non-Interlaced Monitor 0.28DPI
- Window Accelerator Card w/1MB
- Sound Card
- 2 Speakers & Microphone
- Sound Library CD-TITLE
- 2 Button Hi-Res Serial Mouse

486DX-33 ~~11495~~ 486DX2-50 ~~11645~~  
486DX-50 ~~11605~~ 486DX2-66 ~~11795~~

### HD486 VESA Multimedia

- 128K Cache Expandable to 256KB
- 4MB RAM Expandable to 32MB
- 1.44MB Floppy Disk Drive
- CD ROM Drive
- 210MB IDE Hard Disk
- 1:1 Interleave 2 FL/2HD Disk Controller
- 2 Serial, 1 Parallel, 1 Game Port
- 101-key Enhanced Keyboard, MITSUMI
- Mini-Tower case w/ 200W Power supply
- 14" SVGA Non-Interlaced 0.28DPI
- 32 BIT-VLB Graphic Accelerator
- Sound Card
- 2 Speakers & Microphone
- Sound Library CD-TITLE
- 2 Button Hi-Res Serial Mouse

486DX-33 ~~11845~~ 486DX2-50 ~~11745~~  
486DX2-66 ~~11895~~

### HD486 EISA VESA Multimedia

- 256K Cache Expandable to 512KB
- 8MB RAM Expandable to 32MB
- 1.44MB Floppy Disk Drive
- TOSHIBA CD ROM Drive SCSI
- 245MB SCSI Hard Disk, MAXTOR
- 32Bit EISA SCSI Controller
- 2 Serial, 1 Parallel, 1 Game Port
- 101-key Enhanced Keyboard, MITSUMI
- Mid-Tower case w/ 230W Power supply
- 14" VIEWSONIC 6E SVGA NI 0.28 DPI
- ET-4000/w32 VLB w/1MB
- Pro Audio Spectrum 16
- Toolworks Encyclopedia
- CARMEN San Diego
- 2 Button Hi-Res Serial Mouse

486DX-33 ~~12805~~ 386DX2-50 ~~12945~~  
486DX2-66 ~~13045~~

### CD-ROM

|                                       |             |
|---------------------------------------|-------------|
| MITSUMI (INT) W/16bit card MPC/ 350MS | \$195       |
| TOSHIBA XM-3401B/SCSI                 | (INT) \$465 |
|                                       | (EXT) \$575 |
| SONY 31A/controller card              | \$190       |
| SONY 541 SCSI                         | (INT) \$385 |
| TEXEL/SCSI MD-3024/265MS w/caddy      | (INT) \$355 |

### SOUND CARD

|                                              |       |
|----------------------------------------------|-------|
| SOUND BLASTER PRO                            | \$169 |
| SOUND BLASTER 16 ASP                         | \$265 |
| PRO Audio Spectrum 16                        | \$169 |
| SOUND BLASTER compatible/microphone, speaker | \$89  |
| TERMINATOR for EXT CD ROM                    | \$15  |

## UNBEATABLE MULTIMEDIA PACKAGE

### Affordable Package for your family

#### Panasonic 561(INT) AT BUS

- Sound Blaster PRO
- M.S. bookshelf MPC
- M.S. works
- Kings quest
- Mother goose
- Sound library

**\$469**

### Affordable Package for your family

#### MITSUMI MPC CD ROM

- (INT)AT BUS 350MS 150 KB/SEC
- Photo CD Compatible
- 16 Bit CD quality sound card
- Toolworks encyclopedia
- US ATLAS
- CARMEN SAN DIEGO
- Sound library

**\$489**

### Top Performance Package for Windows 3.1 Users

#### TOSHIBA

- XM-3401B (INT)SCSI CD ROM
- PRO Audio Spectrum 16
- Compton's MPC encyclopedia
- M.S. bookshelf MPC
- M.S. works MPC
- CD came pack II

**\$799**

SALES HOURS: 7:30AM - 6:30PM WEEKDAYS 10AM - 6PM SUNDAYS (Phone Order)

SAN JOSE

EL CERRILLO

SACRAMENTO

Tel: (408)720-4493 Fax: (408)720-1967

Tel: (510)528-0753 Fax: (510)528-0757

Tel: (916)483-4278 Fax: (916)483-4826



# WORLD-NET MICROSYSTEMS WEEKLY COMPUTER SPECIALS

## Networking Services

At World-Net Microsystems we are qualified to service your networking needs. Our staff of highly educated professionals have degrees in Computer Engineering, Masters in Computer Engineering, and are CNE Novell Engineering certified. We can provide Networking services whether you purchase the hardware from us or not. We provide the following services:

- ➔ Free Consultation
- ➔ Custom Configuration
- ➔ Complete Turn Key Solution
- ➔ Custom Installation and Cabling
- ➔ Network Management
- ➔ Complete Technical Support

## Networking Software

|                      |      |                     |       |
|----------------------|------|---------------------|-------|
| Netware Lite .....   | \$69 | Novell Version 3.11 |       |
|                      |      | 5 Users .....       | \$635 |
|                      |      | 10 Users .....      | 1555  |
| Lantastic AI/5.0 ... | \$89 | 20 Users .....      | 2155  |

## Networking Products

**Novell 2 Station Starter Kit.....\$199**

**Lantastic 2  
Station Starter Kit.....\$299**

Including:

- ➔ 2 Copies of Novell Lite or Lantastic
- ➔ 2 NE 2000 16 bit Ethernet Adaptors
- ➔ 2 50 Ohm Cable Terminators
- ➔ 1-25 foot cable
- ➔ Novell Additional Users.....\$99
- ➔ Lantastic Additional Users.....158

**SUPER  
SALE**

**Ethernet Cards**

|                                |      |
|--------------------------------|------|
| 16 bit NE2000 .....            | \$49 |
| 16 bit NE2000 Twist Pair ..... | 49   |
| 8 Ports Concentrator .....     | 240  |
| 16 Ports Concentrator .....    | 460  |

## ORCHID/AIR

### 486DX2-66 256K VESA LOCAL BUS

- ➔ Orchid 2 VESA Local Bus Super Board or AIR 3 VESA Local Bus Mother Board
- ➔ Intel 80486DX2-66MHz CPU
- ➔ AMI BIOS
- ➔ Internal Clock/Battery
- ➔ 4MB RAM 70ns
- ➔ TEAC 1.2 Floppy Drive
- ➔ TEAC 1.44 Floppy Drive
- ➔ W.D. 212MB 13ms Hard Drive
- ➔ Orchid VESA VLB Super IDE w/2S/1P/1G
- ➔ Orchid Fahrenheit VLB w/1MB
- ➔ NEC 14" Low Radiation SVGA Non-Interlaced Monitor 0.28dp
- ➔ Mitsumi 101 Enhanced Keyboard
- ➔ Deluxe Mini-Tower
- ➔ 200 Watt Power Supply



**SUPER  
SALE**

**\$1699**

## 486DX2-66 256K VESA Local Bus

- ➔ VESA 32 bit VLB Motherboard
- ➔ Intel 80486DX2-66MHz CPU
- ➔ AMI BIOS
- ➔ Internal Clock/Battery
- ➔ 4MB RAM 70ns
- ➔ TEAC 1.2 Floppy Drive
- ➔ TEAC 1.44 Floppy Drive
- ➔ 212MB Western Digital 13ms Hard Drive
- ➔ TSENG ET4000 w/TMB Hi-Color
- ➔ Relisys 15" Flat Screen 1280x1024 Non-Interlaced SVGA Monitor .28dp
- ➔ Teac 1.2 & 1.44 Floppy Drive
- ➔ IDE 2FD/2HD Controller
- ➔ 2 Serial, 1 Parallel, 1 Game Port
- ➔ Mitsumi 101 Enhanced Keyboard
- ➔ Deluxe Mini Tower
- ➔ 200 Watt Power Supply

**SUPER  
SALE**

**\$1568**

## CD ROM & SOUND CARD

|                                                 |       |
|-------------------------------------------------|-------|
| MITSUMI CD-ROM Drive 350ms .....                | \$159 |
| MITSUMI CD-ROM W/5 Title CD .....               | 228   |
| TOSHIBA XM-3401 200ms.....                      | 375   |
| NEC CDR-74 CD-ROM 280ms .....                   | 570   |
| NEC CDR-84 CD-ROM 280ms .....                   | 425   |
| Panasonic CR522 CD-ROM 380ms.....               | 179   |
| Panasonic CR562 CD-ROM 320ms/300K.....          | 215   |
| Creative Labs Discovery CD 8 Upgrade Kit .....  | 379   |
| Creative Labs Edutainment CD16 Upgrade Kit..... | 499   |
| Sound Blaster Pro.....                          | 105   |
| Pro Audio Spectrum 16.....                      | 138   |
| Sound Blaster Pro Deluxe w/CD.....              | 115   |
| Sound Blaster Pro 16 ASP w/CD.....              | 195   |
| LabTec Stereo Speakers .....                    | 19    |
| CD Bundle Software Kit.....                     | 69    |
| Microsoft Bookshelf (MPC).....                  | 29    |
| Microsoft works (MPC).....                      | 29    |
| Mixed-up Mother Goose (MPC) .....               | 19    |
| King's Quest V (DOS).....                       | 15    |
| Compton's Encyclopedia (MPC).....               | 54    |
| Chess Master 3000 (MPC).....                    | 19    |

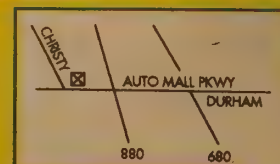
## VIDEO GRAPHIC CARD

|                                         |      |
|-----------------------------------------|------|
| Trident 8900C SVGA Card w/1MB .....     | \$52 |
| Tseng ET-4000 w/1MB Hi-Color .....      | 69   |
| Genoa 8500 VLB w/1MB.....               | 118  |
| Diamond Speed Star Pro w/1MB.....       | 118  |
| Diamond Speed Star Pro VLB w/1MB.....   | 128  |
| Diamond Stealth 24 w/1MB .....          | 140  |
| Diamond Stealth 24 VLB w/1MB.....       | 158  |
| Diamond Viper VLB 2MB VRAM.....         | 368  |
| Orchid Fahrenheit 1280 Plus w/1MB ..... | 139  |
| Orchid Fahrenheit VLB w/1MB.....        | 138  |
| Orchid P9000 VLB w/3MB.....             | 348  |
| ATI Graphics Ultra w/Mouse.....         | 165  |
| ATI Graphics Ultra Pro VLB w/2MB.....   | 318  |
| ATI Graphics Ultra Plus w/2MB .....     | 238  |

**PC UPGRADE WELCOME**

**World-Net Microsystems, Inc.**  
43172 Christy St. ■ Fremont, CA 94538

**Business Hours:**  
Mon-Fri 9:00-6:00  
Sat 10:30-4:00



We Are Inside  
Lincoln Executive Center



BEST PRICE, BEST QUALITY, BEST SERVICE
(510) 770-1158

486DX-33 w/64K VESA Local Bus
VESA 32 bit VLB Motherboard
Intel 80486DX-33MHz CPU
AMI BIOS
Internal Clock/Battery
4MB RAM 70ns
W.D. 212MB, 13ms Hard Drive
32 bit VLB Super IDE Controller
32 bit Cirrus Logic VLB SVGA w/1MB
SVGA Monitor 1024x768 .28dp
Teac 1.2 /1.44 Floppy Drive
2 Serial, 1 Parallel, 1 Game Port
Deluxe Mini Tower
200 Watt Power Supply
Mitsumi 101 Enhanced KB

SUPER SALE

\$1258

386DX-40MHz w/64K Cache
AMD 80386DX-40CPU
AMI BIOS & Math Co-Socket
Internal Clock/Battery
4MB RAM 70ns
170MB Quantum 13ms Hard Drive
Trident SVGA w/512K
SVGA Monitor 1024x768 0.28 dp
1.2 /1.44 Floppy Drive
IDE 2FD/2HD Controller
2 Serial, 1 Parallel, 1 Game Port
Mitsumi 101 Enhanced KB
Deluxe Mini Tower
200 Watt Power Supply

SUPER SALE

\$888

14,400 bps FAX/MODEM
14,400 bps Int Fax/Modem up to 57,600 bps throughput
V.32 bis 14,400 bps
V.42 bis Error Correction
100% Hayes Compatible
MNP 5 Data Compression
14,400 bps G3 Fax Send & Receive
14,400 bps Data Modem
Fast 16550 Chip
CCITT V.32 bis
Caller I.D.
Distinctive Ring
Free Quicklink II for Windows

\$123

MONTHLY CD-ROM SPECIALS
Mitsumi CD ROM w/Controller
350ms/150K Data Transfer Rate
Photo CD Compatible
\$159
Toshiba 3401B SCSI Interface
200ms/330k Data Transfer Rate
Photo CD Compatible
\$375

Table with 2 columns: Monitor Model and Price. Includes Sony CPD 1304S, NEC 1431, Viewsonic 5E, etc.

Table with 2 columns: Printer Model and Price. Includes HP DeskJet 500, Panasonic KX-P 2123, etc.

Table with 2 columns: Add-on Card Model and Price. Includes AT I/O, IDE 2FD/2HD, DTC VESA, etc.

Table with 2 columns: Brand New Drives Model and Price. Includes TEAC 1.44/1.2MB, Quantum 245MB, etc.

Table with 2 columns: Modems/Fax Model and Price. Includes Zoltrix 2400, E-Tech 9600, etc.

Table with 2 columns: Keyboards Model and Price. Includes 101 Enhanced, Keytronic, Fujitsu, etc.

Terms and Conditions:
1. One Year parts and labor warranty on systems.
2. Knowledgeable technical support engineers in service.
3. Prices and availability subject to change without notice.
4. Shipping, insurance and COD charges are extra and nonrefundable.
5. Return shipping must be insured, prepaid and bearing an RMA# on the shipping label.
6. Defective items replaced or repaired at our discretion.
7. Not responsible for typos.
8. All returns subject to 15% restocking fee and cover only World-Net Microsystems brand computers excludes peripherals and software. No refunds after 30 days.
9. Superior reputation for service, quality and value.
10. Purchase orders are welcomed and subject to approval.
11. Price reflects cash discount.

Tel: (510) 770-1158
Fax: (510) 770-1159



# RESOURCES

## Calendar Of Events

### CONFERENCES, SHOWS, AND OTHER SPECIAL EVENTS

#### SEPTEMBER

September 18 Computer Show & Sale. Santa Clara Co. Fairgrounds. Richard James. Call: 1-800-685-1400.

September 18 The Computer Show & Sale. Solano Co. Fairgrounds, Vallejo. MarketPro. Call: (415)388-8893.

September 18 Windows Solutions Conference & Exposition. Santa Clara. Seybold. Call: 1-800-433-5200.

September 19 The Computer Show & Sale. Centre Concord. MarketPro. Call: (415)388-8893.

September 20-22 VARconference V. San Francisco. CPM Conference and Exhibit Group. Call: Tony Valenti, 1-800-972-5244.

September 21-23 Mobile World Conference And Expo. San Jose. DCI. Call: (508)470-3880.

September 22 Maintaining Customer Satisfaction In The Face Of Explosive Growth Conference. Palo Alto. Conference Management Services. Call: Chad, (415)329-0510.

September 25 Computer Show & Sale. Cow Palace. Richard James. Call: 1-800-685-1400.

September 26 The Computer Show & Sale. Scottish Rite Center, Sacramento. MarketPro. Call: (415)388-8893.

September 28-29 Electronic Book 1993 Conference And Exhibition. New York. Mekler. Call: 1-800-632-5537.

#### OCTOBER

October 4-5 Annual AICPA Software Users Conference. New Orleans. AICPA. Call: Brian Salisbury, (212)596-6108.

October 5-8 Embedded Systems Conference. Santa Clara. Call: (214)245-6012.

October 9 Computer Show & Sale. Oakland Coliseum. Richard James. Call: 1-800-685-1400.

October 12-14 Multimedia Expo. San Jose Convention Center. American Expositions, Inc. Call: 1-212-226-4141.

October 13-15 The 10th Advanced EDI Strategies Conference. Chicago, IL. The EDI Group, Ltd. Call: (708)848-0135.

October 14-16 Third Foresight Conference To Focus On Computers And Nanotechnology. Palo Alto. Foresight Institute. Call: (415)324-2490.

October 16-17 Computer Show & Sale. San Francisco Cow Palace. Richard James. Call: 1-800-685-1400.

October 18-22 Win-Dev 1993: International Developers Conference For Windows. Santa Clara. Boston University. Call: (508)649-4200.

October 20-23 Seybold San Francisco Conference And Exposition: The Evolving Process Of Communication. San Francisco. Seybold Seminars. Call: 1-800-433-5200, ext. 1010.

October 21-22 Building For The Future: Computer-based Financial Management Conference. Boston. Harper and Shuman, Inc. Call: (415)543-5622.

#### OCTOBER 12-14

##### SIXTH ANNUAL MULTIMEDIA EXPO *San Jose Convention Center*

This year's Sixth Annual Multimedia Expo is expanding to include critical issues covered in the newest industry metaphor, Digital Video Silicon Valley. The merger of the entertainment industry, the music, film, television, publishing, cable, and home video industries with computers, consumer electronics, and communications technology is generating the most excitement of any industry in the country. The Expo is cosponsored by San Francisco Multimedia Development Group and American Expositions. For registrations, call: (212)226-4141.

#### OCTOBER 14-16

##### FORESIGHT CONFERENCE ON NANOTECHNOLOGY *Palo Alto*

The Third Foresight Conference on Molecular Nanotechnology: Computer Aided Design of Molecular Systems will be held at Hyatt Rickey's Hotel in Palo Alto. The meeting covers how computers are advancing nanotechnology today, and how nanotechnology will radically change the computer industry of tomorrow. The conference will be valuable for people who work professionally in computational chemistry and also for people who have a background in computer science and are interested in finding out what they can do to contribute to the development of molecular manufacturing. Contact: Judy Hill, Foresight Institute, PO Box 61058, Palo Alto, CA 94306. (415)324-2490.

#### OCTOBER 18

##### ACCOUNTING SOFTWARE SEMINAR *Emeryville*

Informational Data Networks offers a free seminar for learning how to improve your productivity by automating your accounting and using time-management software. Software featured in this seminar are Great Plains, QuickBooks, 8020, Telemagic, and more. To register or to find out the other days this seminar is presented, call: Informational Data Networks, 3645 Grand Ave., #202, Oakland, CA 94610. 1-800-696-5267.

#### NOVEMBER 6-7

##### CALIFORNIA COMPUTER SHOW & SALE *Oakland Coliseum*

Richard James Production hosts this two-day event at the Oakland Coliseum. The computer show will feature a variety of exhibitors showcasing millions of dollars in new PC compatibles, hardware, software, CD-ROM, peripherals, and accessories. Admission is \$6.00 each day and runs daily from 10:00 am to 4:00 pm. The Oakland Coliseum is located at I-880 & Hegenberger Rd. Call: Richard James Production, 1-800-685-1400.

*Continued*



# HIGH QUALITY SYSTEMS AT AFFORDABLE PRICES!

2 YEAR LABOR  
& 1 YEAR PARTS  
WARRANTY  
ON ALL SYSTEMS

## 486EISA/VESA LOCAL BUS

### GET THE BEST OF BOTH WORLDS

- Pentium Overdrive Socket
- Adaptec EISA Busmaster SCSI Controller
- Genoa 8500 VL VESA Local Bus Video Card
- 15" Flat Screen Non-Interlaced Monitor
- 200 MB SCSI Hard Disk
- 256K Cache
- 4 MB RAM
- 1.44MB FDD
- Mini-Tower Case
- 101 Keyboard
- 2 Serial, 1 Parallel, 1 Game Port

15" FLAT SCREEN MONITOR  
& 200 MB HARD DRIVE

486DX-33 ... \$1945  
486DX2-66 .. \$2175

## AST 386/486

### \$\$\$BEST PRICE\$\$\$ GUARANTEED

AST BRAVOS  
AST. PREMIAS

1 Year On-site  
2 Additional Years  
Carry In Warranty

## NOTEBOOKS

AST POWEREXEC  
NEC VERSA  
TOSHIBA

BEST  
PRICE

## GENOA

### 486 VESA LOCAL BUS

#### System Includes:

- Genoa 486 Motherboard w/ Pentium Overdrive Socket
- 32-Bit Local Bus Genoa Video Card 16 Million Color
- 32-Bit VL-Bus IDE Controller
- SVGA Monitor .28 dot
- 128K Cache on Board to 256K
- 4 MB RAM Exp to 32 MB
- 1.44 MB FDD
- 170 MB Hard Disk/64K Cache
- 1 Parallel/2 Serial/1 Game Ports
- 101 Key Keyboard
- 200 Watt Power Supply
- Baby AT or Mini Tower Case
- 2 YEAR WARRANTY ON GENOA MOTHERBOARD & VIDEO CARD

170 MB  
HARD DISK

486DX-33 ... \$1285  
486DX-50 ... \$1435  
486DX2-66 ... \$1495

## SYSPER 486

### VESA LOCAL BUS

#### Systems Include:

- 4 MB RAM on Board
- 1.44 MB FDD
- 170 MB IDE Hard Disk
- 2FD/2HD IDE Controller
- 16-Bit SVGA w/512K
- 14" 1024x768 Super VGA Monitor
- 1 Parallel/2 Serial/1 Game Ports
- Desktop Baby or Mini-Tower Case
- Clock/Calendar w/Battery Back-Up
- 101 Keyboard

170 MB  
HARD DISK

486SX-25 ..... \$925  
486DX-33 ... \$1125  
486DX2-50 ... \$1175  
486DX2-66 ... \$1325

## MONITORS

|                           |       |
|---------------------------|-------|
| 14" SVGA .39dp            | \$195 |
| 14" SVGA .28 dp           | 230   |
| 14" SVGA .28 Non-In       | 250   |
| 15" Flat 1280x1024 .28NI  | 385   |
| 17" Flat 1280x1024 .28 NI | CALL  |

|                          |     |
|--------------------------|-----|
| KFC                      |     |
| 15" Flat 1280x1024 .28NI | 445 |
| 17" Flat 1280x1024 .28NI |     |
| w/Dig. Display           | 765 |

### VIEWSONIC

|                  |      |
|------------------|------|
| 14" Viewsonic 4E | CALL |
| 14" Viewsonic 6E | 299  |
| 15" Viewsonic 15 | 520  |
| 17" Viewsonic 7E | 895  |
| 17" Viewsonic 17 | 1095 |
| 20" Viewsonic 20 | 1725 |

### MITSUBISHI

|                 |      |
|-----------------|------|
| HL 6955SETK 20" | 1725 |
| Diamond Pro 17" | 1075 |
| BNC Cable       | 39   |

### NANAO

|           |      |
|-----------|------|
| 17" F550i | CALL |
| 17" T560i | CALL |
| 20" T650i | CALL |

## VIDEO CARDS

|                             |       |
|-----------------------------|-------|
| Genoa 8500 VLB w/1 MB       | \$110 |
| ATI Ultra Plus 1 MB w/Mouse | 275   |
| ATI Ultra Pro 2 MB VLB      | 395   |
| Orchid Fahrenheit VLB       | 145   |
| Orchid VA/VLB               | 195   |
| Celsius VLB 1MB             | 210   |
| P9000                       | 355   |
| Diamond SpeedStar Pro       | 125   |
| Diamond Stealth 24          | 145   |
| Diamond Stealth 24 VLB      | 145   |
| Diamond Stealth Pro 2 MB    | 320   |
| Diamond Viper VLB 2 MB      | 395   |

## KEYBOARDS

|                       |      |
|-----------------------|------|
| 101 Enhanced          | \$25 |
| 101 Enhanced Click    | 35   |
| Maxi 101 Enhanced     | 35   |
| Keytronics 101        | 39   |
| KeyCat II w/Trackball | 75   |
| Focus 9000            | 72   |

## HARD DRIVES

|             |       |
|-------------|-------|
| CONNER      |       |
| 240 MB IDE  | \$245 |
| SCSI DRIVES | CALL  |

### MAXTOR

|             |      |
|-------------|------|
| 130 MB IDE  | 195  |
| 245 MB IDE  | 295  |
| 340 MB IDE  | CALL |
| SCSI DRIVES | CALL |

### WESTERN DIGITAL

|            |      |
|------------|------|
| 210 MB IDE | CALL |
| 245 MB IDE | CALL |
| 340 MB IDE | CALL |

### FUJITSU

|                  |     |
|------------------|-----|
| 2624T 520 MB IDE | 645 |
| 520 MB SCSI      | 675 |
| 1.2 GB SCSI      | 995 |

### QUANTUM

|             |      |
|-------------|------|
| 240 MB IDE  | 265  |
| 240 MB SCSI | 275  |
| 525 MB SCSI | 695  |
| 700 MB SCSI | 895  |
| 1.2 GB      | 1075 |

### TOSHIBA

|             |      |
|-------------|------|
| 877 MB SCSI | 945  |
| 1.2 GB      | 1095 |

## CPU'S

CALL FOR LATEST  
PRICING

## FLOPPY DRIVES

|                       |      |
|-----------------------|------|
| TEAC 360K 5.25"       | \$25 |
| TEAC 1.2 MB 5.25"     | 55   |
| TEAC 1.44 MB 3.5"     | 45   |
| TEAC 2.88 MB 3.5"     | 95   |
| TEAC 1.2/1.44 MB Dual | 139  |

## TAPE BACK-UP

|                       |       |
|-----------------------|-------|
| Colorado DJ110 120 MB | \$139 |
| Colorado DJ20 250 MB  | 189   |
| Tracker 120 MB        | 298   |
| Tracker 250 MB        | 388   |

## TAPE CARTRIDGES

|                                 |         |
|---------------------------------|---------|
| 250MB                           |         |
| DC 2120 Formatted QIC 80 (XMAT) | \$18.95 |
| 6000 (1/4" Tapes)               |         |
| DC 600A 60 MB                   | 15.95   |
| DC 6150 150 MB                  | 16.25   |
| DC 6250 250 MB                  | 20.95   |
| DC 5225 525 MB                  | 24.95   |
| DC 9135 1.35 GB                 | 30.75   |
| DC 9210 2.1 GB                  | 37.00   |

### DAT

|                        |       |
|------------------------|-------|
| 4mm 60 Meters          | 10.50 |
| 4mm 90 Meters          | 12.95 |
| 8mm 112 Meters         | 9.95  |
| 8mm 112 Meters Exabyte | 17.95 |

## CONTROLLERS

|                        |      |
|------------------------|------|
| IDE w/I/O 2S, 1P, 1G   | \$20 |
| ASUS EISA SCSI Caching | 275  |
| Promis IDE VLB Caching | 145  |

### ADAPTEC

|                 |     |
|-----------------|-----|
| 1542C ISA SCSI  | 195 |
| 1742A EISA SCSI | 325 |

### ULTRASTOR

|                       |     |
|-----------------------|-----|
| ULT 34F VLB SCSI 32K  | 285 |
| ULT 24F EISA SCSI 64K | 375 |
| ULT 14F ISA SCSI 32K  | 210 |

## MEMORY

|                    |      |
|--------------------|------|
| 1 MB x 9-70 3 Chip | CALL |
| 1 MB x 9-60 3 Chip | CALL |
| 4 MB x 9-70        | CALL |
| 4 MB x 9-60        | CALL |
| 1 MB x 36-60/70    | CALL |
| 4 MB x 36-60/70    | CALL |

## CD-ROM & SOUND CARDS

|                          |       |
|--------------------------|-------|
| Mitsumi CD-ROM w/Kit     | \$189 |
| Sound Blaster            | 75    |
| Sound Blaster Pro Deluxe | 125   |
| Sound Blaster 16 ASP     | 205   |
| MIDI Kit                 | 39    |
| Edutainment CD 16 Kit    | 499   |
| Thunder Media Kit        | 399   |
| CD Caddy                 | 9     |
| Labtec Speakers          | 20    |

## SCANNERS

|                        |       |
|------------------------|-------|
| LOGITECH HANDHELD      |       |
| Scanman Model 32       | \$135 |
| Scanman 256            | 239   |
| Scanman 256            | 285   |
| MUSTEK HANDHELD        |       |
| Matador 105 400dpi     | 105   |
| Scanmagic 256 400dpi   | 135   |
| Colorartist Pro 800dpi | 390   |
| MICROTEK FLATBED       |       |
| Scanmaker II 600dpi    | 849   |
| Scanmaker 1200dpi      | 1289  |
| MUSTEK FLATBED         |       |
| MFS 6000C 600dpi       | 799   |

## MOTHERBOARDS

|                                   |       |
|-----------------------------------|-------|
| MICRONICS (WITH CPU)              |       |
| 486DX-33 Local Bus w/256K         | \$795 |
| 486DX2-66 Local Bus w/256K        | 1175  |
| NICE (WITHOUT CPU)                |       |
| 486-33/66 w/256K VLB              | 225   |
| 486-33/50/66 w/256K Mini EISA VLB | 295   |
| 486-33/50/66 w/256K EISA/VLB      | 465   |

## MODEM/FAX

|                             |      |
|-----------------------------|------|
| ZOLTRIX                     |      |
| 96/24 Int Fax/Modem         | \$59 |
| 14.4/14.4 Fax Modem Int     | 155  |
| US ROBOTICS                 |      |
| Sportster 14.4/14.4 Fax/Int | 179  |
| Sportster 14.4/14.4 Fax Ext | 195  |



SYSPER

## SYSPER TECHNOLOGIES, INC.

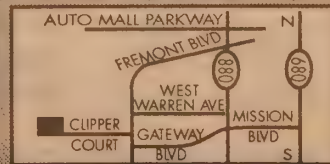
4031 CLIPPER COURT, FREMONT, CA 94538

HOURS: MON-FRI: 9AM-6PM; SAT: 10-4 PST

FAX: (510) 651-9699

TEL: (510) 651-8002

PRICES SUBJECT TO CHANGE W/O NOTICE.  
NOT RESPONSIBLE FOR TYPOGRAPHIC ERRORS



GOVERNMENT & CORPORATE PO'S WELCOME



# RESOURCES

## Calendar Of Events continued

**October 23 Computer Show & Sale.** Santa Clara Co. Fairgrounds. Richard James. Call: 1-800-685-1400.

**October 26-28 Common Desktop Environment Developers Conference.** San Jose Convention Center. UniForum. Call: Richard Jaross, (408)986-8840.

**October 26-28 COSE Developers Conference.** San Jose. Smith & Shows. Call: (508)879-6700

**October 31 Computer Show & Sale.** Alameda Co. Fairgrounds. Richard James. Call: 1-800-685-1400.

## NOVEMBER

**November 2-4 Email World: The Email Applications Conference And Expo.** Santa Clara. DCI. Call: (508)470-3880.

**November 4-5 1993 Technology Summit.** Santa Clara. UC Berkeley Extension. Call: (510)642-3112.

**November 6-7 Computer Show & Sale.** Oakland Coliseum. Richard James. Call: 1-800-685-1400.

**November 13 Computer Show & Sale.** Santa Clara Co. Fairgrounds. Richard James. Call: 1-800-685-1400.

**November 14 Computer Show & Sale.** Rancho Arroyo Sports Complex. Richard James. Call: 1-800-685-1400.

**November 19-21 Media Summit '93.** New York. Reed Exhibition Companies. Call: (203)352-8254.

**November 20 Computer Show & Sale.** San Francisco Cow Palace. Richard James. Call: 1-800-685-1400.

## CLASSES, SEMINARS, AND WORKSHOPS

## SEPTEMBER

**September 7 & 9 Beginning PageMaker Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 18 Careers In Multimedia Class.** San Francisco. SFSU Extended Education. Call: (415)904-7700.

**September 18 Excel On PC/Mac Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 18 Word/Windows Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 18 & 25 & October 2 Hands-On Electronic Music Composition Class.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**September 18-30 Beginning WordPerfect 5.1 Class.** Oakland, Benicia. North Bay Bookkeeping and Business Services. Call: (707)746-8315.

**September 19 WordPerfect Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 20 Automating Your Accounting And Management Software Seminar.** Emeryville. Informational Data Networks. Call: 1-800-696-5267.

**September 20 Beginning DOS Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 20 Beginning Excel Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 20 Beginning Freehand Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 20 BodySynth Workshop.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**September 20 QuickMail Administrator Level I Course.** Berkeley. Network Frontiers. Call: (415)644-9400.

**September 20 TCP/IP Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 20 UNIX User 1 Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 20 Wordperfect Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 20 WordPerfect Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 20-21 PC Troubleshooting And Repair Seminar.** Oakland. Excel Micro Solutions. Call: (510)836-2040.

**September 20-22 Novell Advanced System Administrator 3.11 Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 20-24 Information Systems Analysis Workshop.** San Francisco. Yourdon. Call: 1-800-234-8083.

**September 21 Excel On PC/Mac Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 21 Intermediate WordPerfect Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 21 Intro to PC/Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 21 Microsoft Access Class.** Pleasant Hill. ACTech. Call: (510)685-6327.

**September 21 Novell Quarterly Update Seminar.** Sunnyvale. Novell, Inc. Call: (408)747-6070.

**September 21 QuickMail Administrator Level 2 Course.** Berkeley. Network Frontiers. Call: (415)644-9400.

**September 21 UNIX User 2 Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 21-22 WordPerfect For Windows Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 21 & 23 Beginning Excel Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 21 & 23 Beginning Persuasion Class.** San Francisco. Ciber Training Cen-

ter. Call: (415)974-7206.

**September 21-23 Word For Windows Style Templates And Macros Class.** San Francisco. SFSU Extended Education. Call: (415)904-7700.

**September 21-23 WordPerfect Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 21-24 Intermediate AutoCAD Class.** San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

**September 22 Advanced Word Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 22 Beginning Persuasion Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 22 Intermediate Paradox For DOS Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 22 Intro To Computers Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 22 Managing AppleShare Course.** Berkeley. Network Frontiers. Call: (415)644-9400.

**September 22 NFS Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 22 Novell Quarterly Update Seminar.** San Francisco. Novell, Inc. Call: (408)747-6070.

**September 22 Pentium Architecture Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**September 22 UNIX System V Administration Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 22 & 24 Microsoft Projects For Windows Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 23 Advanced Quark XPress Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 23 Backup Management Course.** Berkeley. Network Frontiers. Call: (415)644-9400.

**September 23 Excel Macros Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 23 Harvard Graphics For Windows Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 23 Intermediate Word For Windows Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 23 Microsoft Excel For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 23 Producing Computer Clip Art Seminar.** San Francisco. Advanced Information Technologies. Call: (415)344-2159.

**September 23 Quicken For Windows Class.** Oakland. Action Computer Training Insti-



# WE SELL QUALITY, RELIABILITY, SERVICE & TECHNOLOGY!!

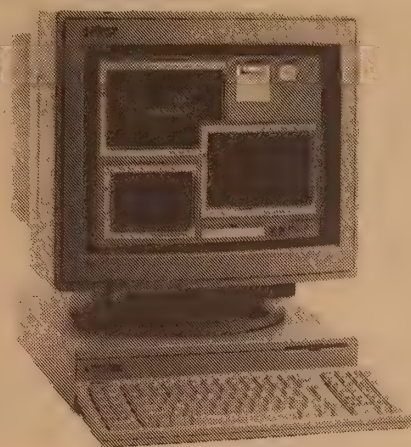
## \*\* PromoX SS II-40 WORKSTATION \*\*

**\$4995**

### SUN SPARC II-40 MHz 100% Compatible

40 MHz SPARC Integer Unit/Floating Point Processor, 64K Write Through Cache, Three S-bus Expansion Slots, 32MB RAM, Sync SCSI Controller, 2 RS-423A I/O Ports, 15-pin Ethernet Port, Desktop Case, Keyboard, Mouse, 340 MB Hard Drive, SVGA Frame Buffer, 15" Color Monitor, SUN Solaris OS1.1 (Includes SUN OS, Sunview and Openwindow)

|                                                                   |          |
|-------------------------------------------------------------------|----------|
| UPGRADE SPARC™ I + TO SPARC™ II-40 .....                          | \$1495   |
| SS II-50 .....                                                    | \$5250   |
| SS 10-30 (100% SPARC 10 COMPATIBLE) .....                         | \$8590   |
| SS 10-41 (100% SPARC 10 COMPATIBLE) .....                         | \$10,345 |
| External Toshiba CD-ROM (200ms) Switchable Between SPARC & DOS .. | \$595    |



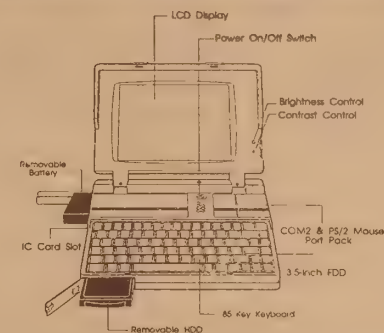
**ONE YEAR  
ON-SITE SERVICE!  
BUY SS II AND GET  
X NET FREE!**

## \*\*\* X TERMINAL/SERVER \*\*\*

|                                                                  |             |
|------------------------------------------------------------------|-------------|
| X Terminal 14"/17" Color Monitor .....                           | \$1545/1745 |
| X-Net (XII/R5 Server for DOS, TCP/IP, PC/NFS, FTP, TELNET) ..... | 245         |
| PC-NET (TCP/IP, NFS, FTP, TELNET, DOS TAR & PRINTER ROUTER) .... | 99          |

► Come see our new technology—Multi-Network Environment

## \*\* NOTEBOOK COMPUTER \*\*



### Supports UNIX/XWINDOWS Driver!

|                                                                                                     |             |
|-----------------------------------------------------------------------------------------------------|-------------|
| 386SX-25/386SL-25/386DXL-33 MHz with 4/8 MB RAM,<br>1.44 MB FD, 80/120/200 MB HD .....              | From \$1150 |
| 486 (SX-25, DX-33/50/66) Upgradable Notebook<br>(Mono/Passive Matrix Color/Active Matrix Color) ... | From \$1700 |

## \*\*\* UNIX FOR PC \*\*\*

|                                                        |      |
|--------------------------------------------------------|------|
| Ready To Run LINUX/GNU/X in CD .....                   | \$60 |
| LINUX w/Sony CD-ROM .....                              | 255  |
| Licensed AT&T UNIX SVR4.0.3 2-Users Complete Set ..... | 600  |
| X11R5/Motif 1.2 for SVR4/UNIXWare/SunSoft UNIX .....   | 290  |

### SunSoft (Interactive) UNIX:

|                                                             |       |
|-------------------------------------------------------------|-------|
| Interactive UNIX/386 Base Solution (2 User) .....           | \$345 |
| Interactive UNIX/386 Network Solution (2 User) .....        | 695   |
| Interactive UNIX/386 Graphics Solution (2 User, Tape) ..... | 835   |
| Interactive UNIX/386 Software Development System .....      | 555   |
| Interactive UNIX/386 X11 Development System .....           | 315   |
| Interactive UNIX/386 Motif Development System .....         | 275   |
| Solaris 2.1 Desktop for x86 .....                           | 555   |
| Solaris 2.1 Workgroup Server for x86 .....                  | 1455  |
| Solaris Driver Developer's Kit for x86 .....                | 225   |
| Solaris 2.1 for x86 ProWorks C .....                        | 975   |
| Solaris 2.1 for x86 ProWorks C++ .....                      | 1455  |

### SCO UNIX (ODT):

|                                                      |       |
|------------------------------------------------------|-------|
| SCO Open Desktop 3.0 (CD-ROM) .....                  | \$835 |
| SCO Open Server Enterprise System (CD 16 User) ..... | 1535  |
| SCO Open Desktop Development System .....            | 1255  |
| SCO Open Server Network System (CD 16 User) .....    | 1325  |
| SCO UNIX (2 User) .....                              | 415   |
| SCO UNIX (16 User) .....                             | 905   |
| SCO UNIX Development System .....                    | 905   |
| SCO TCP/IP for SCO UNIX .....                        | 395   |
| SCO NFS for SCO UNIX .....                           | 625   |

### Univel UnixWare:

|                                               |           |
|-----------------------------------------------|-----------|
| UnixWare Personal Edition (CD ROM/Tape) ..... | \$165/195 |
| UnixWare Personal Utility (CD ROM/Tape) ..... | 180/210   |
| UnixWare Software Development Kit .....       | 420       |
| UnixWare Application Server .....             | 910       |
| UnixWare Server Merge for Windows .....       | 290       |
| UnixWare TCP/IP & NFS .....                   | 210       |
| UnixWare Motif Development Tools .....        | 280       |
| UnixWare Driver Development Tools .....       | 245       |

## \*\*\* NETWORKING \*\*\*

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| SilverNet Starter Kit (the Fastest Peer-to-Peer Network) .....     | \$235   |
| Novell Lite Starter Kit (2 Nodes) .....                            | 200     |
| Novell Netware .....                                               | *BEST   |
| 8-Bit Arcnet Card (Star/Bus) .....                                 | 45/50   |
| 16-Bit Arcnet Card (Star/Bus) .....                                | 60/65   |
| NE-1000 Compatible 8-bit Ethernet Card (Novell Certified) .....    | 55      |
| NE-2000 Compatible 16-bit Ethernet Card (Novell Certified) .....   | 60      |
| Arcnet 8-Port Hub .....                                            | 120     |
| 10 BaseT 8 Port Hub .....                                          | 210     |
| 10 BaseT 12 Port Intelligent Hub .....                             | 500     |
| SMC (Western Digital) 8-bit Ethernet Card (Coax/10BaseT) .....     | 90/95   |
| SMC (Western Digital) 16-bit Ethernet Card (Coax/10BaseT) ..       | 120/125 |
| WD8003E 8-bit Compatible .....                                     | 75      |
| SMC/3 COM/NE2000 16-bit Compatible Combo Board (BNC+AU+10BaseT) .. | 80      |
| Pocket LAN Card .....                                              | 125     |
| 3 Com 3C503 Ethernet II .....                                      | 160     |
| Token Ring Adapter 16/4 Mbs .....                                  | 425     |
| 8 Port Token Ring STP/UTP/MAU .....                                | 345     |
| 8 Port Intelligent Multi-User Card (RS232) .....                   | 299     |

## 486 UPGRADABLE LOCAL BUS SYSTEMS

|                                |             |
|--------------------------------|-------------|
| 486/66 MHz ISA/EISA .....      | \$1015/1130 |
| 486/50 MHz ISA/EISA .....      | 950/1065    |
| 486/33 MHz .....               | 810         |
| 486SX-33 MHz .....             | 675         |
| 486SX/25 MHz .....             | 595         |
| IBM 486SLC2/66 .....           | 760         |
| IBM 486SLC2/50 .....           | 730         |
| 386/40 MHz Non-Local Bus ..... | 525         |
| 386/33 MHz Non-Local Bus ..... | 525         |

### ONE YEAR PARTS, TWO YEAR MAINBOARD, THREE YEARS LABOR WARRANTY

- 256K Cache • 4 MB Toshiba or Hitachi 70ns RAM
- 1.2 MB & 1.44 MB Floppy Drives
- Local Bus IDE Controller w/2S/1P/1G Ports
- Keytronics 101 Key Enhanced Keyboard
- Mini-Tower or Desk Top Case w/200 W Power Supply
- PC Users Guide • P24T/Overdrive Socket Ready

### ALL SYSTEMS GUARANTEED TO RUN UNIX, WINDOWS NT, OS/2, NOVELL, PICK

|                              |           |
|------------------------------|-----------|
| Windows NT/Upgrade .....     | \$345/275 |
| Windows Advance Server ..... | \$1275    |

## MOTHERBOARDS

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| EISA Local Bus (2 Slot) 256K Cache .....                            | \$230 |
| NICE EISA Local Bus (1 Slot) (Up to 256 MB On Board) 256K Cache ... | 345   |
| ISA Local Bus (2 Slot) 256K Cache .....                             | 110   |
| 386/40 Motherboard & CPU 128K Cache .....                           | 130   |

## LOCAL BUS CONTROLLER CARDS

|                                                      |      |
|------------------------------------------------------|------|
| Local Bus IDE Controller .....                       | \$34 |
| Local Bus IDE Cache Controller (Up To 16 MB) .....   | 180  |
| Forex Local Bus SCSI Controller (With HD & FD) ..... | 215  |
| Ultrastor 34F SCSI Controller (With HD & FD) .....   | 270  |
| Local Bus IDE Blazer 10X Faster Than IDE .....       | 100  |

## Video Card Options:

|                                                           |      |
|-----------------------------------------------------------|------|
| Accumose 512K VGA Card .....                              | \$40 |
| Trident 1 MB VGA Card .....                               | 55   |
| Tseng Labs ET4000 1 MB VGA Card Hi-Color .....            | 80   |
| Diamond SpeedStar 24X .....                               | 130  |
| Diamond Stealth Pro VLB 1 MB VGA Card .....               | 250  |
| Diamond Stealth VLB .....                                 | 155  |
| ATI Graph Ultra 1 MB .....                                | 200  |
| ATI Ultra Pro Local Bus 2 MB .....                        | 335  |
| Orchid Fahrenheit VA 1 MB Local Bus .....                 | 145  |
| Local Bus Cirrus Logic 16 Million Colors .....            | 85   |
| Local Bus ET4000 1MB VGA Hi-Color 16 Million Colors ..... | 95   |
| Local Bus ET4000/W32 1MB VGA Hi-Color 16M Colors .....    | 125  |

## Monitor Options:

|                                                 |      |
|-------------------------------------------------|------|
| 14" Mono .....                                  | \$95 |
| 14" SVGA Mono (1024x768) (.28mm) .....          | 115  |
| 14" SVGA (.28mm) .....                          | 255  |
| 14" NI SVGA (.28mm) .....                       | 275  |
| 14" Relisys VESA NI SVGA (.28mm) 70Hz .....     | 310  |
| 14" ViewSonic NI SVGA (.28mm) .....             | 310  |
| 15" NI SVGA (.28mm) .....                       | 405  |
| 15" Hitachi SVGA (1024x768 .28mm) .....         | 480  |
| 15" NEC 4FG (1024x768 .28mm) .....              | 699  |
| 15" ViewSonic 15 (.28mm) .....                  | 480  |
| 17" ViewSonic NI SVGA (1280x1026) (.26mm) ..... | 1105 |
| 17" Samsung NI SVGA (1280x1024) (.26mm) .....   | 925  |

## Hard Drive Options:

|                                              |           |
|----------------------------------------------|-----------|
| Conner 120 MB .....                          | \$165     |
| Conner 540 MB 12ms (IDE) .....               | 585       |
| Fujitsu 520 MB 9ms (SCSI) .....              | 650       |
| Fujitsu 1.2 GB 10ms (SCSI) .....             | 1025      |
| Maxtor 245 MB 15ms (IDE) .....               | 230       |
| Maxtor 340 MB 13ms (IDE) .....               | 325       |
| Maxtor 1.2 GB 10ms (SCSI) .....              | 1050      |
| Maxtor 1.7 GB 13ms (SCSI) .....              | 1195      |
| Quantum 525 MB (SCSI) .....                  | 750       |
| Quantum 1.2 GB (SCSI) .....                  | 1050      |
| Micropolis 2.4 GB (SCSI) .....               | 2125      |
| External SCSI Hard Drives-PC/SPARC/MAC ..... | Add \$100 |

## MULTIMEDIA KIT

- SONY CD-ROM
- Gallant 16 Bit Sound Card
- Microphone
- Speakers
- 5 CD-ROM Titles
- Bundled Software
- CD Player
- Karaoke Player
- Voyetra's Multimedia Utilities
- Midi Softs Window Utilities
- Monologue DOS & Windows

**\$385**

**UNIX/NOVELL  
LANMANAGER  
NETWORK  
INSTALLATION/  
MAINTENANCE  
CALL**

## Some Of Our Satisfied Customers:

- AMD
- Cadence
- DCA
- Ford
- Fujitsu
- IBM
- ISSI
- Lockheed
- McDonald Douglas
- Microsoft
- Quantum
- San Jose State
- Santa Clara Univ.
- Stanford Univ.
- Winbond

# PromoX Systems

1050 East Duane Ave., Suite B  
Sunnyvale, Ca 94086

Sparc registered trademark of Sparc Systems Inc.



**Tel: (408) 733-2966  
Fax: (408) 733-2968**

**E-Mail Address: promox@cup.portal.com**

**Hours: Mon-Fri 9-6 Sat 10-4**  
Prices Subject To Change W/O Notice





## Calendar Of Events continued

tute. Call: (510)562-5511.

**September 23 UNIX System V Administration Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 23 Windows 3.1/Intro Mac Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 23-30 Aldus Freehand Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**September 24 Advanced PageMaker Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 24 Beginning Windows Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 24 Excel For Macintosh Class.** Pleasant Hill. ACTech. Call: (510)685-6327.

**September 24 Intermediate Lotus 1-2-3 Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 24 Quattro Pro For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 24 Tools, Techniques, and Technology for Office Automation Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**September 24 UNIX System V Administration Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 24 Using Laptops For Professionals Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**September 24 Windows For Workgroups Seminar.** Emeryville. Informational Data Networks. Call: 1-800-696-5267.

**September 24 WordPerfect Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 24 & 27 Microsoft Project For The Mac Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 25 Excel Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 25 Microsoft Word On PC/Mac Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 25 The Computer, A Tool For The Artist Lecture.** San Francisco. SF State Extension. Call: (415)904-7700.

**September 26 Lotus On DOS For Windows Class.** San Jose. InfoMind. Call: (408)243-1121.

**September 27 Beginning Quark XPress Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 27 Lotus 1-2-3 Macros Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 27 Lotus Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 27 Performer As Technology Workshop.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**September 27 System Manager Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 27 Windows, Level II Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 27-November 15 Intro To Interactive Multimedia Lecture.** San Francisco. SF State Extension. Call: (415)904-7700.

**September 27-October 1 Object-Oriented Analysis and Design Workshop.** San Francisco. Yourdon. Call: 1-800-234-8083.

**September 28 Advanced Freehand Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 28 FileMaker Pro For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 28 Intermediate WordPerfect For Windows Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 28 Intro To Mac Networks Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 28 Intro to UNIX, System V Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**September 28 Pagemaker 5.0 Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 28 Paradox For Windows Class.** Pleasant Hill. ACTech. Call: (510)685-6327.

**September 28 System Manager Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 28 Using Laptops For Productivity Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**September 28 & 30 Beginning Illustrator Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 28-30 Ventura Publishing Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 28-30 Word/Windows Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 28-October 1 Intro To AutoCAD For DOS Class.** San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

**September 28-October 12 Swivel 3-D Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**September 28-October 26 Immediate MacroMind Director Lecture.** San Francisco. SF State Extension. Call: (415)904-7700.

**September 29 Aldus Persuasion For Windows Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 29 Beginning PowerPoint Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 29 DBASE IV Class.** Oakland.

Action Computer Training Institute. Call: (510)562-5511.

**September 29 Excel Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**September 29 Intermediate Excel For Windows Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 29 Intro To HyperCard Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 29-30 CorelDRAW Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 30 Advanced Excel Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 30 Advanced WordPerfect Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**September 30 Services and Support Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**September 30 Supporting System 7.0 Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**September 30 WordPerfect For Windows II Class.** Oakland. California Computer Options. Call: (510)444-5700.

**September 30-October 1 Local Area Networks: LANtastic To Novell Seminar.** Oakland. Excel Micro Solutions. Call: (510)836-2040.

**September 7-30 AutoLISP Intro Class.** San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

## OCTOBER

**October 1 Beginning DOS 5.0 Class.** Oakland. California Computer Options. Call: (510)444-5700.

**October 1 Beginning DOS Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 1 Intro To The Mac Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 1 Intro To WordPerfect Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**October 1 Microsoft Access And FoxPro For Windows Class.** San Francisco. SFSU Extended Education. Call: (415)904-7700.

**October 1 NetWare System Administrator 3.11 Seminar.** Emeryville. Informational Data Networks. Call: 1-800-696-5267.

**October 1 Wordperfect Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 1 WordPerfect For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 1 & 4 Beginning Photoshop Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.



# WHY BUY FROM ANYONE ELSE... WHEN YOU CAN BUY FROM THE BEST— UNIVERSAL COMPUTER PRODUCTS

**FREE**  
mouse pad with  
mouse purchase

**1 YEAR PARTS/  
1 YEAR LABOR  
WARRANTY  
ON ALL  
SYSTEMS**

## 486 Computer System

- 4MB RAM
- 1.2MB & 1.44MB Floppy Drives
- 2 Serial, 1 Parallel, 1 Game Port
- 101 Keyboard
- 200MB IDE Hard Drive
- SVGA Card w/1MB
- 14" SVGA Monitor (.28 dp)
- Mid-Tower Case
- MS-DOS 6.0

**DX-33 \$1385**  
**DX-50 \$1535**  
**DX2-66 \$1590**

## 386 Computer System

- 4MB RAM
- 1.2MB & 1.44MB Floppy Drives
- 2 Serial, 1 Parallel, 1 Game Port
- 101 Keyboard
- 120MB IDE Hard Drive
- SVGA Card
- 14" SVGA Monitor
- Mini-Tower or Desktop Case
- MS-DOS 6.0

**DX-33 or DX-40 \$1100**  
**SX-25 or SX-33 \$1025**

## REPAIR & UPGRADE SERVICES ON IBM & IBM COMPATIBLES

- FULL SERVICE
- NO APPOINTMENT NECESSARY
- SAME DAY TURNAROUND
- COMPETITIVE RATES
- EXPERIENCED TECHNICIAN FOR OVER 7 YEARS
- COURTEOUS SERVICE

### ADD ON BOARDS

|                                |       |
|--------------------------------|-------|
| AT I/O Card 25,1P,1G           | \$20  |
| Mono Graphic/Printer           | \$20  |
| IDE Dual HD/FD Cont            | \$20  |
| SCSI 1:1 HD/FD Cont            | \$99  |
| VGA Card w/256K                | \$40  |
| Trident SVGA w/1MB             | \$70  |
| C-Logic VLB SVGA w/1MB         | \$99  |
| Everex RAM 3000 Expansion Card | \$90  |
| Everex RAM 10K Expansion Card  | \$150 |

### CASES AND POWER SUPPLY

|                         |       |
|-------------------------|-------|
| Baby AT w/200W Power    | \$70  |
| Baby Tower w/200W Power | \$70  |
| Mid Tower w/220W Power  | \$110 |
| Full Tower w/250W Power | \$160 |
| 200W (XT) Power Supply  | \$60  |
| 200W Power Supply       | \$60  |
| 230W Power Supply       | \$60  |

### DRIVES

|                                    |       |
|------------------------------------|-------|
| Frame for 3.5" Hard & Floppy Drive | \$5   |
| <b>CONNER</b>                      |       |
| CP-30254 250MB IDE                 | \$270 |
| CP-30104 120MB 19ms IDE            | \$190 |
| CP-30204 200MB 16ms IDE            | \$265 |
| <b>MAXTOR</b>                      |       |
| 213MB 15ms SCSI HD                 | \$275 |
| 245MB 15ms SCSI HD                 | \$300 |
| LXT-213A 212MB 16ms IDE            | \$265 |
| LXT-7245A 245MB IDE                | \$270 |
| LXT-7345A 345MB IDE                | \$320 |
| <b>TEAC</b>                        |       |
| 1.2MB 5.25"                        | \$56  |
| 1.44MB 3.5"                        | \$56  |

### MODEMS

|                                  |       |
|----------------------------------|-------|
| Everex 2400 Baud Internal        | \$75  |
| Everex 2400 Baud Int. w/MNP5     | \$150 |
| Everex 2400 Baud External        | \$175 |
| Everex 2400 Baud Ext. w/MNP5     | \$195 |
| US ROBOTIC 14,400 Int. Fax Modem | \$185 |
| US ROBOTIC 14,400 Ext. Fax Modem | \$209 |
| US ROBOTIC 14,400 Int. Modem     | \$159 |
| US ROBOTIC 14,400 Ext. Modem     | \$185 |

### CD-ROM

Bundle  
Specials!

#### Panasonic 523 AT BUS

- Sound Blaster Pro
- Kings Quest
- Mother Goose
- Family Choice
- Dictionary of the Living World

**\$420**

#### Sony CDU31A-02

- Sound Blaster Pro
- Battle Chess
- Mother Goose
- US Atlas & Automap
- Mavis Beacon Teaches Typing

**\$445**

|                                   |           |
|-----------------------------------|-----------|
| Creative Lab Discovery CD16       | \$460     |
| Creative Lab Discovery CD8        | \$395     |
| Internal CD ROM Drive             | \$230/195 |
| Sound Blaster Card (8-Bit)        | \$79      |
| Sound Blaster Pro (16-Bit) Deluxe | \$179     |

### INTEL MATH CO-PROCESSORS

|           |       |
|-----------|-------|
| 387 SX-16 | \$115 |
| 387DX-20  | \$99  |
| 387 DX-25 | \$99  |
| 387 DX-33 | \$99  |

### MEMORY CHIPS

|             |        |
|-------------|--------|
| <b>DRAM</b> |        |
| 1MBx1-8     | \$4.50 |
| 256Kx8/10   | \$1.25 |
| 256Kx4-8    | \$4.50 |
| 64Kx10      | \$1    |
| <b>SIMM</b> |        |
| 4MB x9-7    | CALL   |
| 1MBx9-7/8   | CALL   |
| 1MBx3-7/8   | CALL   |
| <b>SIPP</b> |        |
| 1MBx9-8     | CALL   |
| 256Kx9-8    | CALL   |

### MONITORS

|                               |       |
|-------------------------------|-------|
| 14" Monochrome                | \$105 |
| SVGA Monitor 1024x768 .28dp   | \$270 |
| SVGA Monitor 1024x768 .39dp   | \$230 |
| Viewsonic 6                   | \$345 |
| Relisys 14" SVGA Non-Int.     | \$290 |
| 15" SVGA Monitor 1280x1024 NI | \$430 |

### MOTHERBOARDS

|                           |        |
|---------------------------|--------|
| 386 SX 25MHz Motherboard  | \$110  |
| 386 DX 33MHz Motherboard  | \$180  |
| 386 DX 40MHz Motherboard  | \$195  |
| 486 DX2 66MHz Motherboard | \$CALL |
| 486 DX 33MHz Local Bus MB | \$CALL |
| 486 DX 33MHz Motherboard  | \$450  |
| 486 DX 50MHz Motherboard  | \$CALL |

### PRINTERS

|                           |          |
|---------------------------|----------|
| Citizen 190GX (9 Pin)     | \$175    |
| Citizen GSX230 (24 Pin)   | \$249    |
| Citizen GSX240 (24 Pin)   | \$299    |
| Citizen Color Upgrade Kit | \$49     |
| Panasonic 2180 (9 Pin)    | \$169    |
| Panasonic 2123 (24 Pin)   | \$239    |
| Panasonic 2124 (24 Pin)   | \$319    |
| Panasonic 4410 Laser      | \$555    |
| Toner KX-P450             | \$37     |
| Toner KX-P453             | \$35.95  |
| Toner KX-P451             | \$39.95  |
| HP 51604A                 | \$11.95  |
| HP 51608A                 | \$19.95  |
| HP 92261A                 | \$11.95  |
| HP 92275A                 | \$63.95  |
| HP 92295A                 | \$77.95  |
| HP 92298A                 | \$109.95 |

### TAPE BACKUP

|                                 |           |
|---------------------------------|-----------|
| Colorado 120MB/250MB            | \$159/190 |
| External Kit for Colorado Drive | \$110     |
| Archive 250MB                   | \$180     |

### MOUSES

|                                    |      |
|------------------------------------|------|
| Logitech Trackball                 | \$85 |
| Logitech Serial Mouseman           | \$55 |
| Microsoft Bus Mouse                | \$90 |
| Microsoft Serial Mouse             | \$79 |
| DEXXA Mouse w/Windows 3.1          | \$69 |
| DEXXA Mouse                        | \$27 |
| Mouse Systems A3 Mouse for Mac     | \$50 |
| Mouse Systems A3 Trackball for Mac | \$50 |

**PRINTER RIBBONS & DATA CARTRIDGES ARE AVAILABLE  
COAX & TWISTED CABLES ARE AVAILABLE**

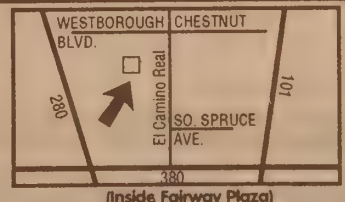
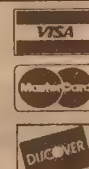
# UNIVERSAL COMPUTER PRODUCTS

951 El Camino Real, South San Francisco, CA 94080

**(415) 583-9736 Fax (415) 583-3457**

Mon.-Fri.: 9am-6pm Sat: 10am-5pm

Prices subject to change w/o notice • Not responsible for misprints





# RESOURCES

## Calendar Of Events continued

October 1-8 Director 2 Class. San Francisco. Center For Electronic Art. Call: (415)956-6500.

October 2 Build And Upgrade An IBM PC Clone Seminar. Oakland. Excel Micro Solutions. Call: (510)836-2040.

October 2 Introduction To Microsoft Project Workshop. Rohnert Park. Sonoma State University Extension. Call: (707)664-2613.

October 2 Lotus Class. Oakland. Action Computer Training Institute. Call: (510)562-5511.

October 2 Microsoft Word On PC/Mac Class. San Jose. InfoMind. Call: (408)243-1121.

October 2 Multimedia In Sales And Marketing Seminar. San Francisco. SF State Extension. Call: (415)904-7700.

October 2-3 Digital Video Special Effects Class. San Francisco. SF State Extension. Call: (415)904-7700.

October 2 & 4 Beginning Filemaker Pro Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 3 WordPerfect On DOS For Windows Class. San Jose. InfoMind. Call: (408)243-1121.

October 4 Advanced NetWare System Administrator 3.11 Seminar. Emeryville. Informational Data Networks. Call: 1-800-696-5267.

October 4 CNExcelerator Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 4 Lotus 1-2-3 For Windows, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 4 Macintosh Recording Studio Workshop. San Francisco. Zakros InterArts. Call: (510)881-3605.

October 4 MacProject Pro Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 4 Microsoft Word For Windows, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 4 TCP/IP Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 4 Word/Windows Class. Oakland. Action Computer Training Institute. Call: (510)562-5511.

October 4 WordPerfect 6.0 For DOS Class. Oakland. California Computer Options. Call: (510)444-5700.

October 4-5 Asymetrix Toolbook For Windows Class. San Francisco. SF State Extension. Call: (415)904-7700.

October 4-5 PC Troubleshooting & Repair Seminar. Oakland. Excel Micro Solutions. Call: (510)836-2040.

October 4-25 Symbolics Animation Class. San Francisco. Center For Electronic Art. Call: (415)956-6500.

October 4-8 Wavefront Training Class. San Francisco. SF State Extension. Call: (415)904-7700.

October 4-December 6 Hands-On HyperCard Lecture. San Francisco. SF State Extension. Call: (415)904-7700.

October 4-December 6 Instructional Design For Multimedia Lecture. San Francisco. SF State Extension. Call: (415)904-7700.

October 5 Beginning PageMaker Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 Beginning Windows Class. Oakland. California Computer Options. Call: (510)444-5700.

October 5 CNExcelerator Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 5 Intro To Lotus 1-2-3 Class. Walnut Creek. Computer Education Center. Call: (510)937-2566.

October 5 Intro to PC/Windows, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 Quattro Pro/DOS, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 Supporting System 7.0 Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 TCP/IP Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 5 & 7 Beginning DOS Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 & 7 Beginning Word Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5 & 7 Intro To The Mac Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 5-7 Lotus Class. Oakland. Action Computer Training Institute. Call:

(510)562-5511.

October 5-8 Customizing AutoCAD Class. San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

October 6 Beginning Quark XPress Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 6 CNExcelerator Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 6 Electronic Mail Seminar. Oakland. California Computer Options. Call: (510)444-5700.

October 6 Excel Class. Oakland. Action Computer Training Institute. Call: (510)562-5511.

October 6 FileMaker Pro For Windows, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 6 Intro To Microsoft Windows Class. Walnut Creek. Computer Education Center. Call: (510)937-2566.

October 6 NFS Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 6 WordPerfect For DOS, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 6-8 FoxPro For Windows Class. San Francisco. SFSU Extended Education. Call: (415)904-7700.

October 6 & 8 Microsoft Project For The Mac Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 6-8 Multiresolution Signal Decomposition Class. Burlingame. UC Berkeley Extension. Call: (415)323-8141.

October 6-13 Macintosh Basics Class. San Francisco. Center For Electronic Art. Call: (415)956-6500.

October 6 & 13 & 20 Digital Image Design With Photoshop Class. San Francisco. Zakros InterArts. Call: (510)881-3605.

October 7 Beginning Persuasion Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 7 Beginning WordPerfect For Windows 5.2 Class. Oakland. California Computer Options. Call: (510)444-5700.

October 7 CNExcelerator Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 7 Intro To Excel For Windows Class. Walnut Creek. Computer Education Center. Call: (510)937-2566.

October 7 Lotus 1-2-3 For DOS, Level I Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 7 NFS Class. Oakland. MIS Services Corp. Call: (510)208-5700.

October 7 Novell Quarterly Update Seminar. Sacramento Novell, Inc. Call: (408)747-6070.

October 7 Power Mac Class. San Francisco. Ciber Training Center. Call: (415)974-7206.

October 7-8 CorelDRAW Class. San Francisco. Ciber Training Center. Call:

Save Time And \$\$ At MarketPro Shows

# The COMPUTER

Products SUPERSTORE

# Show & Sale

Hours 10-5pm At Your Door

|                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Sun. Sept. 26 - SACRAMENTO</b><br/>Scottish Rite Center</p> <p><b>Sat. Oct. 2 - SO. SAN FRANCISCO</b><br/>Conference Center</p> <p><b>Sun. Oct. 3 - SAN RAFAEL</b><br/>Marin Civic Center</p> <p><b>Sun. Oct. 10 - HAYWARD</b><br/>Centennial Hall</p> | <p><b>Sat. Oct. 16 - SAN MATEO</b><br/>San Mateo Co. Expo</p> <p><b>Sun. Oct. 17 - CONCORD</b><br/>Centre Concord</p> <p><b>Sat. Oct. 23 - VALLEJO</b><br/>Solano Co. Fairgrounds</p> <p><b>Sun. Oct. 24 - SANTA ROSA</b><br/>Sonoma Co. Fairgrounds</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**NEW Hardware • Software • Peripherals • Accessories • CD Roms**

Admission \$6 • FREE With Membership • For Other locations (415)456-6730

**SAVE UP TO 90% ON ALL Your Computer Needs!**



# Tower Computer.

1373 So. Bascom Ave, San Jose, CA 95128

OVER 5 YEARS OF SERVICE IN THE BAY AREA.

## MONITOR & VIDEO & HARD DRIVE

|                               |          |                          |        |
|-------------------------------|----------|--------------------------|--------|
| 14" S-VGA 1024x768 .39mm      | \$198    | Maxtor 130Mb 15ms IDE    | \$165  |
| 14" S-VGA 1024x768 .28mm      | \$240    | Maxtor 213Mb 15ms IDE    | \$210  |
| 14" S-VGA 1024x768 .28mm N    | \$265    | Maxtor 245Mb 15ms IDE    | \$230  |
| 14" Acer S-VGA 33D .28mm      | \$270    | Maxtor 345Mb 14ms IDE    | \$295  |
| 14" Acer S-VGA 34T .28mm N    | \$305    | Maxtor 540Mb 12ms IDE    | \$698  |
| Sony 1304-S S-VGA .25mm N     | \$540    | Conner 120Mb 19ms IDE    | \$168  |
| Sony 1430-S S-VGA .25mm N     | \$560    | Conner 170Mb 14ms IDE    | \$195  |
| Sony 1604-S S-VGA .16" N      | \$928    | Conner 250Mb 14ms IDE    | \$265  |
| Sony 1730-S S-VGA 17" N       | \$999    | Conner 340Mb 12ms IDE    | \$398  |
| View Sonic 5E S-VGA 14"       | \$370    | Conner 540Mb 12ms IDE    | \$695  |
| View Sonic 6E S-VGA 14"       | \$307    | W-Digital 213Mb 14ms IDE | \$198  |
| View Sonic 7 S-VGA 17"        | \$910    | W-Digital 255Mb 13ms IDE | \$238  |
| View Sonic 15 S-VGA 15"       | \$543    | W-Digital 340Mb 12ms IDE | \$290  |
| View Sonic 17 S-VGA 17"       | \$1068   | W-Digital 420Mb 12ms IDE | \$438  |
| Trident 168T 512Kb            | \$34     | Other Call               | \$\$\$ |
| Trident 168T 1Mb              | \$60     |                          |        |
| ET-4000 with 1Mb              | \$68     |                          |        |
| Diamond Speed Star Pro        | \$110    | Quantum 245Mb 16ms IDE   | \$298  |
| Diamond Speed Star Pro VLB    | \$118    | Quantum 525Mb SCSI-II    | \$738  |
| Diamond Stealth 24 VLB 1Mb    | \$148    | Quantum 700Mb SCSI-II    | \$898  |
| Diamond Stealth Pro VRAM 1Mb  | \$248    | Quantum 1 Gb SCSI-II     | \$1083 |
| Diamond Viper VLB 2Mb         | \$398    | Quantum 1.2Gb SCSI-II    | \$1158 |
| ATI-Graphic Ultra Pro VLB 2Mb | \$338    | Fujitsu 520Mb 12ms IDE   | \$698  |
| Maxtor Ultima VLB 2Mb         | \$795    | Fujitsu 520Mb SCSI-II    | \$735  |
| Orchard Fahrenheit 1280 VLB   | \$148    | Fujitsu 1.2Gb SCSI-II    | \$1078 |
| Orchard-VA 1280 VLB           | \$218    | Fujitsu 2.4Gb SCSI-II    | \$1898 |
| Orchard Selsius VLB 2Mb       | \$268    | Toshiba 1.2Gb SCSI-II    | \$999  |
| Orchard-P9000 VLB 3Mb         | \$348    | Other Call               | \$\$\$ |
| Other Call                    | \$\$\$\$ | Teac 1.2Mb F/D           | \$48   |
| IDE Controller 2HD/2FD        | \$10     | Teac 1.44Mb F/D          | \$45   |
| IDE 2 Ser, 1 Par, 1 Game      | \$15     | Combo 1.2M & 1.44Mb      | \$145  |
| IDE VLB 2 Ser, 1 Par          | \$38     | Modem 2400               | \$38   |
| IDE Promise VLB Caching       | \$168    | Fax-Modem 24/9600        | \$65   |
| DTC-SCSI 3280 Controller      | \$98     | Fax-Modem 14.400         | \$158  |
| DTC-SCSI VLB Controller       | \$135    | US Robotics 14.400       | \$168  |
| Adaptec 1542CK SCSI-Cont.     | \$248    | Colorado 120Mb Tape B/U  | \$145  |
| Adaptec 1742 EISA-SCSI Contr. | \$398    | Colorado 250Mb Tape B/U  | \$178  |
| Wonder IDE 4FD/2HD            | \$48     | Sound Blaster Deluxe     | \$78   |
| MFM controller                | \$45     | Sound Blaster Pro Deluxe | \$125  |
| Other Call                    | \$\$\$   | Audio Pro 16             | \$125  |

## FREE INSTALLATION WITH ANY CD-ROM & HARD DRIVE PURCHASE !!!

**Texel SCSI CD-ROM W/Spetrum Audio Pro 16 \$498**

**Panasonic Dual Speed CD-ROM W/Sound Blaster Pro Deluxe \$358**

**Panasonic CD-ROM W/Sound Blaster Pro Deluxe \$328**

**Mitsumi CD-ROM W/Gallant 5000 Sound Card \$288**

## MOTHER BOARD & CPU

|                |       |                    |       |                          |       |
|----------------|-------|--------------------|-------|--------------------------|-------|
| 386sx25 w/CPU  | \$88  | VLB-386DX33-128Kb  | \$115 | VL-386DX33-128Kb w/CPU   | \$125 |
| 386sx33 w/CPU  | \$98  | VLB-386DX40-128Kb  | \$125 | VL-386DX40-128Kb w/CPU   | \$145 |
| 386DX33-128Kb  | \$138 | VLB-486sx25-128Kb  | \$138 | VL-486sx25-128Kb w/CPU   | \$295 |
| 386DX40-128Kb  | \$110 | VLB-486DX33-128Kb  | \$145 | VL-486DX33-128Kb w/CPU   | \$388 |
| 486sx25-128Kb  | \$120 | VLB-486DX40-128Kb  | \$147 | VL-486DX40-128Kb w/CPU   | \$398 |
| 486DX33-128Kb  | \$125 | VLB-486DX2-50-128K | \$148 | VL-486DX2-50-128K w/CPU  | \$445 |
| 486DX40-128Kb  | \$128 | VLB-486DX-50-128Kb | \$150 | VL-486DX-50-128Kb w/CPU  | \$525 |
| 486DX2-50-128K | \$135 | VLB-486DX2-66-128K | \$153 | VL-486DX2-66-128K w/CPU  | \$635 |
| 486DX-50-128Kb | \$138 | EISA-486DX2-50-128 | \$198 | EISA-486DX2-50-128 w/CPU | \$745 |
| 486DX2-66-128K | \$145 | EISA-486DX2-66-128 | \$210 | EISA-486DX2-66-128 w/CPU | \$825 |

## NETWORK

|                                                |             |
|------------------------------------------------|-------------|
| 3COM                                           |             |
| 3C503 8 bit coax / TP ethernet                 | 179/189     |
| 3C503-16 Etherlink II 16 bit coax / TP         | 169/179     |
| 3C507 16 bit coax ethernet                     | 279         |
| 3C507-TP 16 bit TP ethernet                    | 299         |
| 3C509 Etherlink III coax / 5 pack              | 135/575     |
| 3C509 Etherlink III TP / 5 pack                | 139/585     |
| 3C509 Combo / 5 pack                           | 155/625     |
| 3C579 Etherlink III EISA coax / TP             | 245/249     |
| 3C529 Etherlink III for MCA                    | 245         |
| 3C529 TP Etherlink III for MCA                 | 249         |
| 3C621 Link Builder 10 BT (12 port)             | 745         |
| 3C623 Single port BNC Module                   | 125         |
| TokenLink III 16/4 ISA/ MCA/ EISA              | 465/495/645 |
| Link Match SNMP/NLM software                   | 269         |
| ADDTRON (Novell Approved)                      |             |
| ET-200STS NE2000 coax compatible               | 85          |
| ET-200TPS NE2000 TP compatible                 | 75          |
| AE-200STA NE2000 3 in 1 Combo                  | 85          |
| AE-200LC 8 or 16bit BNC & TP                   | 89          |
| Starter Kit for Novell Lite 1.1                | 255         |
| Starter Kit for Lantastic AI DOS / WIN         | 279/299     |
| Transceivers : ET10TB (TP->AUI)                | 59          |
| Transceivers : ET10CB (BNC->AUI)               | 59          |
| HUB : UTP8 (8TP + 1BNC)                        | 249         |
| HUB : UTP16 (16TP + 1BNC + 1AUI)               | 495         |
| Pocket Adapter : BNC / TP                      | 135/139     |
| Arclnet :                                      |             |
| - Arc110HI 8bit star/bus coax                  | 59          |
| - Arc120TP 8bit Combo                          | 65          |
| - Arc220TP 16bit Combo                         | 75          |
| - 8 port active Hub coax / TP                  | 135/145     |
| Token Ring :                                   |             |
| - 16/4 ISA / MCA                               | 379/399     |
| - Mau 1 / Mau 3                                | 295/295     |
| ALLIED TELEIS (CentreCOM)                      |             |
| AT-1500T TP / AT-1700T                         | 79          |
| AT-1500BT / AT-1700BT (TP+BNC)                 | 99          |
| ARTISOFT (Lantastic)                           |             |
| AE-2 Ethernet starter Kit v5.0, 10Mbps         | 449         |
| AE-2 Ethernet starter Kit v5.0 WIN             | 509         |
| AE-2 Ethernet adapter                          | (185)195    |
| AE-2 Ethernet adapter for MCA                  | 265         |
| AE-3 Ethernet starter kit 4.1 + upgrade to 5.0 | 485         |
| AE-3 Ethernet adapter                          | 225         |
| 2Mbps adapter                                  | 139         |
| AE-1/T 8bit 10Base-T adapter                   | 135         |

**Tower WILL MATCH price with any Brand Name Products. WILL BEAT any Generic Products Price !!!**

## TCI-PLUS Super Sonic VLB 486 Series Systems

- \* Super Sonic Mother Board w/Intel CPU
- \* 256KB Cache Memory Ext.
- \* 4Mb of Memory Installed
- \* IDE Controller 2 H/D & 2 F/D
- 2 ser, 1 Pal, 1 Game Port
- \* Teac 1.2Mb & 1.44Mb F/D
- \* Orchard or Diamond 32Bit VLB
- \* 14" S-VGA Color Monitor
- 1024x768 .28mm Non-Interlaced
- \* IDE 345Mb 14ms Hard Drive
- \* KeyTronic 101 Enhanced Keyboard
- \* Microsoft Mouse (Ser) 400 DPI
- \* Mini Tower Case with UL & CSA
- \* 100 % IBM Compatible

486 DX2-66Mhz \$1788

486 DX-50Mhz \$1718

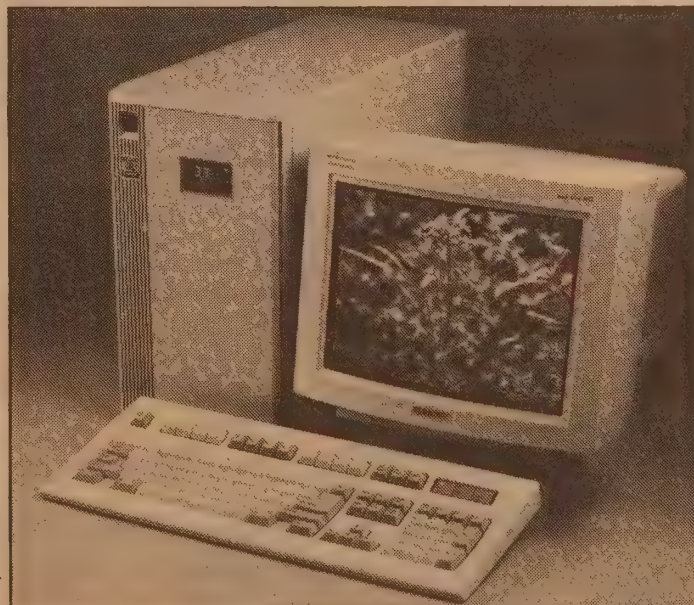
486DX40Mhz \$1598

486 DX2-50Mhz \$1658

486 DX-33Mhz \$1578

- \* Customize Configuration Available
- \* Maximum 12 Hours turnaround for Services
- \* 72 Hours Burn-In & Tested Before Delivery
- \* 30 Days Money Back Warrantee.
- \* Full One Year Parts
- \* 5 Year Labors Warranty.

**SAVE 3% ON CASH PURCHASE !**



TEL (408)288-6983, FAX (408)288-7120



Mon - Fri : 10:00AM - 8:00PM, Sat 10:00AM - 5PM  
1373 So. Bascom Ave, San Jose, CA 95128



## TCI-SYSTEM VESA BUS 386 / 486 Series

- \* TCI-Mother Board w/ CPU
- \* 128KB Cache Memory Ext.
- \* 4Mb of Memory Installed
- \* IDE Controller 2 H/D & 2 F/D
- 2 ser, 1 Pal, 1 Game Port
- \* Teac 1.2Mb & 1.44Mb F/D
- \* Spider 32Bit VLB w/1Mb
- \* 14" S-VGA Color Monitor
- 1024x768 Interlaced
- \* IDE 170Mb 14ms Hard Drive
- \* KeyTronic 101 Enhanced Keyboard
- \* Microsoft Mouse (Ser) 400 DPI
- \* Mini Tower Case with UL & CSA
- \* 100 % IBM Compatible

486 DX2-66Mhz \$1378

486 DX-50Mhz \$1318

486DX40Mhz \$1198

486 DX-33Mhz \$1188

486SX33Mhz \$1095



# USM

## US MACH

**US MACH Systems  
USM Distributors**



Incorporated  
1983



HOURS: M-F 9-6 • Sat 10-5

Price and availability subject to change.  
No surcharge for credit cards.

Visit our stores

In SOUTHERN CALIFORNIA:

USM BREA (714) 255-0113

USM IRVINE (714) 252-8335



American  
Megatrends



# FACTORY AUTHORIZED DISTRIBUTOR



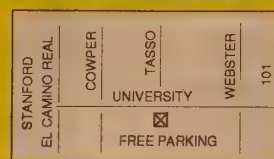
American  
Megatrends



**USM SAN FRANCISCO**

1101 Grandview Drive So. San Francisco, CA 94080

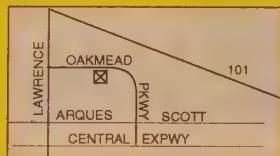
415-952-5885 FAX: 415-266-9134



**USM PALO ALTO**

540 University Ave. Palo Alto, CA 94301

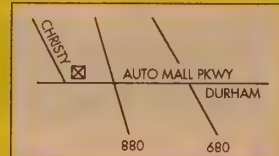
415-325-0651 FAX: 415-325-2459



**USM SUNNYVALE**

1290 Oakmead Parkway, Sunnyvale, CA 94086

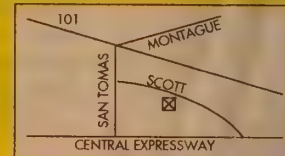
408-738-8291 FAX: 408-738-8299



**USM FREMONT**

43104 Christy Street, Fremont, CA 94538

510-623-9040 FAX: 510-623-7592



**USM SANTA CLARA**

3070 Scott Blvd. Santa Clara, CA 95054

408-980-0602 FAX: 408-980-0604



## Enterprise III 486-33/66MHz EISA-VESA w/256k cache

- Enterprise III Motherboard
- Intel CPU 486DX-33/486DX2-66
- Pentium P24T Support-ZIF socket
- 256K Static RAM cache
- 4MB RAM exp. to 256MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Full tower case w/250W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- AMIDIAG Diagnostics V.4 w/manuals
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

### \$1495

Enterprise III - 33

### \$1695

Enterprise III - 66



## STATE OF THE ART TECHNOLOGY

The World Leader in AMI BIOS & Hardware Design

FREE AMIDIAG  
Diagnostic software/manuals  
w/ every AMI System  
PC Magazine  
Editor's Choice

MS  
DOS 6.0 &  
MS Ergonomic  
Mouse  
included

FREE 1 year  
On-site Service support  
for Corporate volume  
buyers



## SuperVoyager II 486-33/66MHz VESA Local Bus - 256k cache

- Supervoyager II Motherboard
- Intel CPU 486DX-33/486DX2-66
- Pentium P24T Support-ZIF socket
- Built in IDE I/O 2S/1P
- 256K Static RAM cache
- 4MB RAM exp. to 64MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Mid tower case w/235W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- AMIDIAG Diagnostics V.4 w/manuals
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

### \$1295

SuperVoyager II - 33

### \$1495

SuperVoyager II - 66

**NEW!**



## Enterprise IV 486-33/66MHz EISA-VESA w/256k cache

- Enterprise IV Motherboard
- Intel CPU 486DX-33/486DX2-66
- Pentium P24T Support-ZIF socket
- Built in IDE I/O 2S/1P
- 256K Static RAM cache
- 4MB RAM exp. to 256MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Full tower case w/250W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- AMIDIAG Diagnostics V.4 w/manuals
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

### \$1595

Enterprise IV - 33

### \$1795

Enterprise IV - 66

**SPECIAL**

## BABY EISA 486-33/66MHz 256K Ca.

- Baby EISA Motherboard
- Intel CPU 486DX-33/486DX2-66
- 256K Static RAM cache
- 4MB RAM exp. to 32MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Mid tower case w/235W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- AMIDIAG Diagnostics V.4 w/manuals
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

### \$1295

Baby EISA - 33

### \$1495

Baby EISA - 66

**COMING  
SOON!**

## EXCALIBUR PENTIUM



American  
Megatrends

# MegaViews - Did You Know!!

• In the January issue of PC Sources, the four top ranked systems all used the SuperVoyager motherboard from American Megatrends.

"When it's all said and done, the biggest difference between motherboards and between systems comes down to chip design."

"Among the 11 reviewed systems, five chip set vendors are represented: American Megatrends, Micronics, Opti, SIS and VLSI. Of these, without a doubt, the most efficient design is American Megatrends."



# MICRONICS

Authorized  
Distributor

FREE  
Microsoft Ergonomic  
Mouse & MS DOS 6.0

## MICRONICS EISA-VLB System 486-66MHz w/256k

- Micronics EISA-VLB Motherboard
- Intel CPU 486DX-33/486DX2-66
- Pentium P24T Support-ZIF socket
- 256K Static RAM cache
- 4MB RAM exp. to 64MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Full tower case w/250W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

**\$1395**

EISA - VLB - 33

**\$1595**

EISA - VLB - 66

## MICRONICS VLB System VCP 486-33/66MHz w/256k

- Micronics VLB Motherboard
- Intel CPU 486DX-33/486DX2-66
- 256K Static RAM cache
- 4MB RAM exp. to 64MB
- TEAC 1.2MB & 1.44MB FD
- Key Tronic 101 keyboard
- Mid tower case w/235W PS
- CPU Cooling Fan
- Microsoft ergonomic mouse
- MS DOS 6.0
- Full burn-in
- 1 year parts & labor warranty

**\$1195**

VLB - 33

**\$1395**

VLB - 66

## K-STOR

### Removable Hard Drive Kit

- 250MB
- 3.5"
- IDE-AT

Call for  
Introductory  
Offer

## RICOH

Super-Fast, Ultra Reliable

### Magneto Optical

**\$725**

Drive - Internal

## TEAC

SCSI 2  
CD ROM

**\$325**

CD-50

## VESA LOCAL BUS SUPER SALE!!



ORCHID • Prima • Percom

Loaded with: 32bit VLB IDE • 32bit VLB 16M True Color SVGA  
Maxtor 170MB or 245MB Hard Drive

### CONFIGURATION:

- 486-33DX/486-66DX2
- VESA Local Bus Motherboard
- Percom/Prima/Orchid/Micronics/AMI
- 4MB, 70ns RAM
- 256k Static RAM Cache
- 32bit VLB IDE
- 32bit VLB True Color SVGA
- SVGA monitor 1024x768 .28dp
- 2 Floppies—1.2MB & 1.44MB
- Maxtor 170MB or 245MB HD
- 2 serial, 1 parallel, 1 game ports
- 101 Enhanced Keyboard
- Minitower or desktop case
- 1 year Parts & Labor Warranty

FREE  
Serial  
Mouse



### Percom 486-33 VLB

170MB

245MB

**\$1245**

**\$1295**

### Prima 486-33 VLB

**\$1345**

**\$1395**

### Orchid 486-33 VLB

**\$1445**

**\$1495**

### Percom 486-66 VLB

**\$1445**

**\$1495**

### Prima 486-66 VLB

**\$1545**

**\$1595**

### Orchid 486-66 VLB

**\$1645**

**\$1695**

## US MACH EMERALD ISA SPECIALS

Powerful yet Affordable!!

### CONFIGURATION:

- 4MB, 70ns RAM
- Maxtor 170MB or 245MB HD
- 2 Floppies—1.2MB & 1.44MB
- SVGA Monitor 1024x768 .28 dp
- SVGA Card w/1MB
- 101 Enhanced Keyboard
- 2 Serial, 1 Parallel, 1 Game port
- Enhanced Case, Minitower
- 1 year Parts & Labor Warranty

FREE  
Serial  
Mouse

### 386-40/128k AMD

170MB

245MB

**\$995**

**\$1045**

### 486-33DX INTEL

**\$1195**

**\$1245**

### 486DX2-66 INTEL

**\$1395**

**\$1445**

Upgrading Your System? Go US MACH! Best Product, Price, Quantity, Service!



## Broken Heart

(or *Corazon Roto*), installed in Mexico City as part of a festival that commemorated the 500th Anniversary of the Discovery of the Americas, drew parallels between the broken hearts of individual lovers and the broken hearts of warriors and nations.

continued from page 313

Company ink-jet printing process. He likes the larger-than-monitor size of these prints (*Interference*, for instance, is 82" x 94"), the large fields of color, and the fact that the process accentuates the raster texture of computer-generated images.

### INTEGRATING COMPUTERS INTO THE ART SCHOOL CURRICULUM

Although there are sculptors—Oakland sculptor Bruce Beasley, or Stuart Dickson who works with stereolithography, for instance—who routinely use computers in design and fabrication processes, most studio artists have no interest in integrating computer tools into their work. "There is a stigma attached to the use of computers by artists who work with painting, sculpture, and ceramics," says Dan Collins, who co-directs an experimental school for advanced art students, the Deep Creek School in Telluride, Colorado. "I'd like to try and break that down by integrating computers into the curriculum—making computers available to sculptors and painters and working together to discover ways to use them in these media."

At the Deep Creek School, Collins and architecture student Bart Lynch worked on the Macintosh computer with the sound edit program Sound Edit Pro to get time-dependent visual representations of sounds. Both Collins and Lynch used these visual representations of sounds to model pottery by importing them to Swivel 3D (3-D drawing/modeling and rendering for the Macintosh), where the sound form can be lathed and used as a template to create

actual ceramic works. "I am doing this to see if pleasing sounds make pleasing pottery and vice versa," Lynch says.

Also at Deep Creek, design student Charlie Pelletier reconstructed an old coal shed so that it functioned both as a sculpture and as a dwelling (students at Deep Creek sleep in tents, an abode that Pelletier did not find completely to his liking). Using the computer program form-Z (for Macintosh computers), he made a full-size template to construct the trusses and then avoided measuring or checking by gluing the template directly onto the lumber. "I see no need to use traditional drafting tools when I can do what I want to do better on a computer," Pelletier told me.

### COMPUTER-AIDED SCULPTURE

In his own sculpture, Dan Collins has explored anamorphosis—the making and viewing of distorted images. Recent work utilizes computer "mapping" procedures to plot and subsequently distort the topographic features of 3-D surfaces, using processes and programs developed by Robb Lovell, a computer specialist currently at NASA in Maryland, and by Cyberware, Inc. of Monterey.

In some of Collins' computer-aided sculptures, the image is fragmented into an array of physically discrete parts—producing, for instance, distorted self-portraits with multiple profiles. In others, body parts are elongated or reduced unnaturally in size—a child-size figure whose head is that of the artist's 75-year-old mother is seated at a distorted table, or

in *The Mechanics of Generosity* many elongated human hands reach out from the wall to grasp small amounts of flour (whose release is mechanically triggered by the viewer).

To fabricate these works, he uses laser scanning equipment to digitize figures and objects and then alters their internal proportional relationships. Once he has arrived at the final form on the computer screen, he uses a computer-controlled three-axis milling machine to accurately reproduce the sculpture's often complex topography. Steve Adelman of Cyberware, Inc. has worked with Collins in this process.

Ohio sculptor Jon Fordyce utilizes an Atari Computer 3D CAD program to integrate his computer and steel forging skills in works like his stainless steel *Grid 14*. He also makes multilayered digital prints with sculptural qualities. Fordyce's work (as well as that of Bruce Beasley and Stuart Dickson and many others) featured in a video produced by Rob Fisher is called *The Computer: A Tool for Sculptors*, that is composed of material originally presented at International Sculpture '92.

### A GULF REMAINS

But there still remains a gulf between many painters and sculptors and crafts-people and artists who work with computers. "CAD/CAM sculpture doesn't personally excite me. I find the traditional processes of sculpture at least as stimulating as the product. Getting my hands into clay or wax or metal, doing hard physical work, sweating and getting dirty to solve problems of gravity and structure and plasticity and perspective to produce something that might be a lasting triumph of beauty over struggle, all adds up to provide a sense of dissociation and transcendence that text isn't rich enough to describe," says Chicago sculptor, Steven Mansee, in a topic about "Computers in Painting, Sculpture, and Ceramics" on the "Arts" conference on the WELL—a topic that includes information and discussion from installation artist Tim Collins, printmaker Jeff Shay, and WELL conference host Kathleen Creighton, among others.

But Mansee uses online systems and is open to those with different points of view "I hasten to add that this is only what works for me. I respect artists who use computers to get into the same zone and look forward to much interesting work," he says. ■

### RESOURCES:

**form-Z**  
Autodessys, Inc.  
2011 Riverside Dr.  
Columbus, OH  
43221  
(614)488-8838  
Fax: (614)488-0848

**SoundEdit Pro**  
**Swivel 3D**  
**Professional**  
Macromedia, Inc.  
600 Townsend St.,  
Ste. 310W  
San Francisco, CA  
94103  
(415)252-2000

**The WELL**  
27 Gate Five Rd.  
Sausalito, CA  
94965  
(415)332-4335  
(voice)



# 32-Bit VESA LOCAL BUS

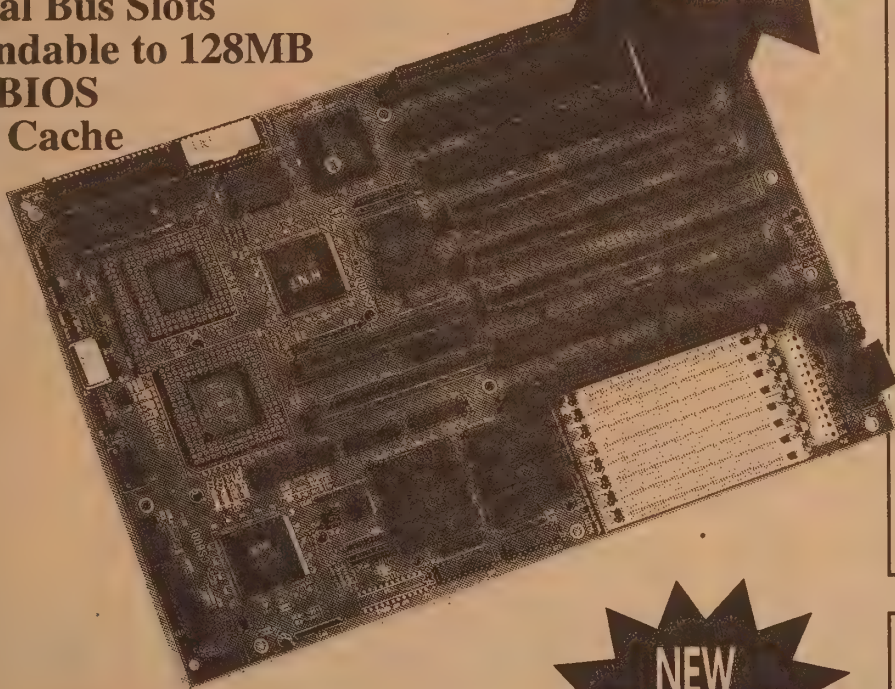
LOCAL BUS SPEEDS UP WINDOWS, MULTIMEDIA & CAD UP TO 5X AS FAST!! NOW YOUR CHOICE IS VESA LOCAL BUS!!

## 486-EISA+VESA LOCAL BUS

33/50/DX2-66 MHz

Includes:

- 3 EISA Slots
- 2 Local Bus Slots
- Expandable to 128MB
- AMI BIOS
- 128K Cache



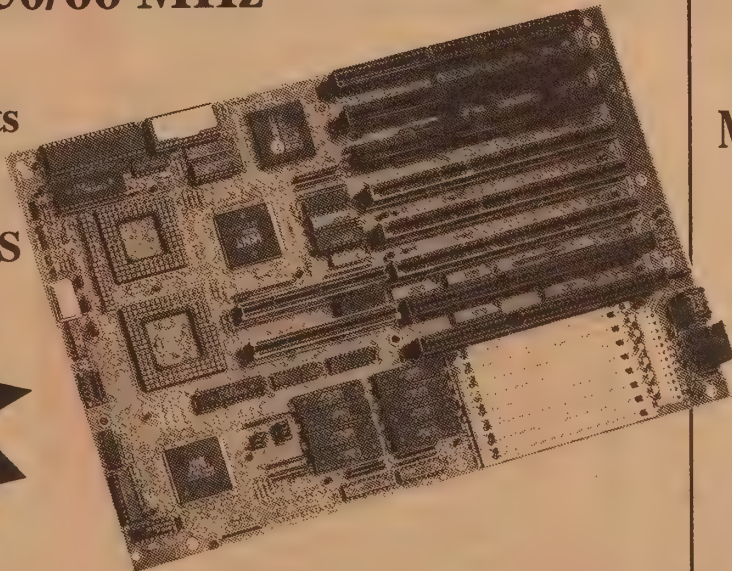
NEW  
PRODUCT!

## 486-VESA LOCAL BUS

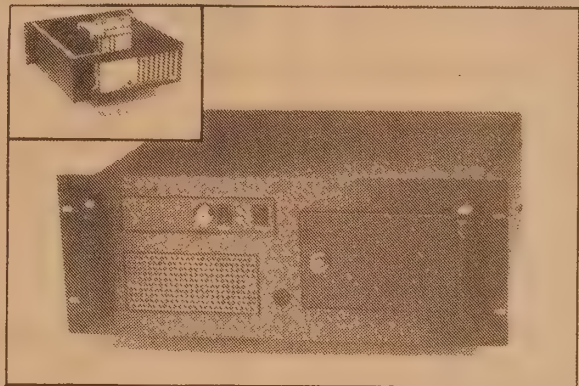
DX-33/DX2-50/66 MHz

Includes:

- 6 ISA Slots
- 2 Local Bus Slots
- AMI BIOS
- 128K Cache
- 2x72 Pin SIMMS



## RACK MOUNT COMPUTER ENCLOSURES



### Features:

- Designed for "baby" Motherboards
- 8 Full Length Slots
- Shock Mounted Drive Bracket for 2 Half Height 5 1/4" Drives
- Two 37 CFM Intake Fans (In addition to power supply fan)
- Built-In Speaker
- Power On/Off Switch
- Power On/Off LED Indicator
- Keyboard Lock
- Hard Disk Access LED Indicator
- Reset Switch
- Lockable Drive Bay Door
- Front Panel Mounted Keyboard Connector

Now Is The Perfect Time To Upgrade Your Older Computer Systems To The *Latest And Fastest* Technology with **COMWARE'S** **NEW 486 VESA LOCAL BUS MOTHERBOARDS w/128K CACHE.** **PRICES START AT ONLY**

**\$129.00\***

Completely Compatible With Your 286 & 386 Software

**CALL TODAY FOR MORE INFORMATION!**

\*Limited Time Offer

**DEALERS, VOLUME BUYERS, VAR'S CALL FOR QUANTITY PRICES  
CORPORATE PO'S WELCOME**

**COMWARE**  
MICRO, INC.

**(800) 286-0288**  
2247 RINGWOOD AVE.  
SAN JOSE, CA 95131

**(408) 433-0288**  
Fax: (408) 433-0254  
HOURS: M-F 9-5:30  
\* Prices Subject To Change w/o Notice



# HI-TECH USA

(408) 262-8688 Milpitas  
(415) 508-8688 San Carlos

| SYSTEM                    | MB + CPU | BASIC SYSTEM | BASIC SYS<br>+40MB HDD<br>+14" MONO<br>& MGP CARD | BASIC SYS<br>+40MB HDD<br>+ VGA CARD<br>& MONITOR | BASIC SYS<br>+40MB HDD<br>+ SVGA CARD<br>& MONITOR | BASIC SYS<br>+80MB HDD<br>+ SVGA CARD<br>& MONITOR | BASIC SYS<br>+120MB HDD<br>+ SVGA CARD<br>& MONITOR | BASIC SYS<br>W/4MB RAM<br>1.2 & 1.44 FDD<br>+130MB HDD<br>+SVGA CARD<br>& MONITOR | BASIC SYS<br>W/4MB RAM<br>1.2 & 1.44 FDD<br>+170MB HDD<br>+SVGA CARD<br>& MONITOR | BASIC SYS<br>W/4MB RAM<br>1.2 & 1.44 FDD<br>+200MB HDD<br>+SVGA CARD<br>& MONITOR | BASIC SYS<br>W/4MB RAM<br>1.2 & 1.44 FDD<br>+250MB HDD<br>+SVGA CARD<br>& MONITOR | BASIC SYS<br>W/4MB RAM<br>1.2 & 1.44 FDD<br>+340MB HDD<br>+SVGA CARD<br>& MONITOR |
|---------------------------|----------|--------------|---------------------------------------------------|---------------------------------------------------|----------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 486DX2-66/256C Orchid VLB | \$608    | \$788        | \$958                                             | \$1,058                                           | \$1,088                                            | \$1,134                                            | \$1,148                                             | \$1,348                                                                           | \$1,368                                                                           | \$1,388                                                                           | \$1,408                                                                           | \$1,488                                                                           |
| 486DX-50/256C Orchid VLB  | 554      | 708          | 898                                               | 998                                               | 1,028                                              | 1,074                                              | 1,088                                               | 1,288                                                                             | 1,308                                                                             | 1,328                                                                             | 1,348                                                                             | 1,408                                                                             |
| 486DX-33/256C Orchid VLB  | 414      | 568          | 758                                               | 858                                               | 888                                                | 934                                                | 948                                                 | 1,148                                                                             | 1,168                                                                             | 1,188                                                                             | 1,208                                                                             | 1,268                                                                             |
| 486SLC2-66/64C IBM VLB    | 348      | 518          | 708                                               | 808                                               | 838                                                | 884                                                | 898                                                 | 1,098                                                                             | 1,118                                                                             | 1,138                                                                             | 1,158                                                                             | 1,218                                                                             |
| 486SLC2-50/64C IBM VLB    | 258      | 428          | 618                                               | 718                                               | 748                                                | 794                                                | 808                                                 | 1,008                                                                             | 1,028                                                                             | 1,048                                                                             | 1,068                                                                             | 1,128                                                                             |
| 486DX2-66/128C VLB        | 558      | 718          | 908                                               | 1,008                                             | 1,038                                              | 1,084                                              | 1,098                                               | 1,298                                                                             | 1,318                                                                             | 1,338                                                                             | 1,358                                                                             | 1,418                                                                             |
| 486DX-50/128C VLB         | 498      | 658          | 848                                               | 948                                               | 978                                                | 1,024                                              | 1,038                                               | 1,238                                                                             | 1,258                                                                             | 1,278                                                                             | 1,298                                                                             | 1,358                                                                             |
| 486DX-33/128C VLB         | 358      | 518          | 708                                               | 808                                               | 838                                                | 884                                                | 898                                                 | 1,098                                                                             | 1,118                                                                             | 1,138                                                                             | 1,158                                                                             | 1,218                                                                             |
| 486DX2-66/128C EISA       | 594      | 754          | 944                                               | 1,044                                             | 1,074                                              | 1,120                                              | 1,134                                               | 1,334                                                                             | 1,354                                                                             | 1,374                                                                             | 1,394                                                                             | 1,454                                                                             |
| 486DX-50/128C EISA        | 548      | 708          | 898                                               | 998                                               | 1,028                                              | 1,074                                              | 1,088                                               | 1,288                                                                             | 1,308                                                                             | 1,328                                                                             | 1,348                                                                             | 1,408                                                                             |
| 486DX-33/128C EISA        | 398      | 558          | 748                                               | 848                                               | 878                                                | 924                                                | 938                                                 | 1,138                                                                             | 1,158                                                                             | 1,178                                                                             | 1,198                                                                             | 1,258                                                                             |
| 486DX2-66C ISA            | 508      | 668          | 858                                               | 958                                               | 988                                                | 1,034                                              | 1,048                                               | 1,248                                                                             | 1,268                                                                             | 1,288                                                                             | 1,308                                                                             | 1,368                                                                             |
| 486DX-50/128C ISA         | 484      | 644          | 834                                               | 934                                               | 964                                                | 1,010                                              | 1,024                                               | 1,224                                                                             | 1,244                                                                             | 1,264                                                                             | 1,284                                                                             | 1,344                                                                             |
| 486DX2-50C ISA            | 384      | 544          | 734                                               | 834                                               | 864                                                | 910                                                | 924                                                 | 1,124                                                                             | 1,144                                                                             | 1,164                                                                             | 1,184                                                                             | 1,244                                                                             |
| 486DX-33C ISA             | 314      | 474          | 664                                               | 764                                               | 794                                                | 840                                                | 854                                                 | 1,054                                                                             | 1,074                                                                             | 1,094                                                                             | 1,114                                                                             | 1,174                                                                             |
| 486SX-33C ISA             | 184      | 344          | 534                                               | 634                                               | 664                                                | 710                                                | 724                                                 | 924                                                                               | 944                                                                               | 964                                                                               | 984                                                                               | 1,044                                                                             |
| 486SX-25C ISA             | 124      | 284          | 474                                               | 574                                               | 604                                                | 650                                                | 664                                                 | 864                                                                               | 884                                                                               | 904                                                                               | 924                                                                               | 984                                                                               |
| 486DLC-40/64C ISA         | 164      | 324          | 514                                               | 614                                               | 644                                                | 690                                                | 704                                                 | 904                                                                               | 924                                                                               | 944                                                                               | 964                                                                               | 1,024                                                                             |
| 486DLC-33/64C ISA         | 132      | 288          | 478                                               | 578                                               | 608                                                | 654                                                | 668                                                 | 868                                                                               | 888                                                                               | 908                                                                               | 928                                                                               | 988                                                                               |
| 386DX-40/64C              | 108      | 268          | 458                                               | 558                                               | 588                                                | 634                                                | 648                                                 | 848                                                                               | 868                                                                               | 888                                                                               | 908                                                                               | 968                                                                               |
| 386SX-40                  | 78       | 238          | 428                                               | 528                                               | 558                                                | 604                                                | 618                                                 | 818                                                                               | 838                                                                               | 858                                                                               | 878                                                                               | 938                                                                               |
| 386SX-33                  | 68       | 228          | 418                                               | 518                                               | 548                                                | 594                                                | 608                                                 | 808                                                                               | 828                                                                               | 848                                                                               | 868                                                                               | 928                                                                               |

\* **BASIC SYSTEM CONFIGURATION:** Motherboard & CPU, 1MB memory installed, 1:1 2HD/2FD controller with 2S/1P/1G, 1.2MB or 1.44MB Floppy Drive, Internal Clock/Calendar, Enhance Case with Power Supply, and 101-Key Enhanced Keyboard.

## Super Sale - Best Prices in Town!

### DELUXE SYSTEMS

|                     |       |
|---------------------|-------|
| 386SX-33            | \$848 |
| 386SX-40            | 858   |
| 386DX-40/64K        | 878   |
| 486SX-25/64K        | 948   |
| 486SX-33/64K        | 998   |
| 486DLC-33/64K       | 918   |
| 486DLC-40/64K       | 938   |
| 486DX-33/64K        | 1,118 |
| 486DX-40/64K        | 1,128 |
| 486DX2-50/64K       | 1,188 |
| 486DX-50/64K        | 1,258 |
| 486DX2-66/64K       | 1,308 |
| 486 DX-33/128K EISA | 1,178 |
| 486DX-50/128K EISA  | 1,308 |
| 486DX2-66/128K EISA | 1,368 |
| 486SLC2-50/64K VLB  | 1,078 |
| 486SLC2-66/64K VLB  | 1,128 |
| 486DX-33/64K VLB    | 1,128 |
| 486DX-50/64K VLB    | 1,268 |
| 486DX2-66/64K VLB   | 1,318 |

### SYSTEM CONFIGURATION

- Motherboard w/CPU
- 4MB RAM 70NS
- 170MB Fast Hard Drive
- 1.2MB and 1.44MB Floppy Drive
- IDE 2HD/2FD Controller w/2S/1P/1G
- 512KB SVGA Card
- 14" SVGA .28 Color Monitor
- 101-Key Enhanced Keyboard
- Enhanced Case w/Power Supply

### OPTIONS

- 200MB Hard Drive.....Add \$25
- 250MB Hard Drive.....Add \$50
- 340MB Hard Drive.....Add \$100
- 540MB Hard Drive.....Add \$330
- 14" Non-Interlaced Monitor.....Add \$30
- 15" Non-Interlaced Monitor.....Add \$120
- VLB IDE Controller.....Add \$20
- 16BIT SVGA Card w/1MB.....Add \$20
- Window Accelerator w/1MB.....Add \$30
- Orchid Fahrenheit 1280.....Add \$110
- Diamond S.S. Pro VLB w/1MB.....Add \$70
- Orchid Fahrenheit VLB w/1MB.....Add \$120
- 250MB Tape Back-up.....Add \$140
- 16BIT Ethernet Card.....Add \$50
- Deluxe Speakers.....Add \$10
- Sony CD-ROM.....Add \$160
- Sound Blaster Pro Deluxe.....Add \$118
- CD ROM Upgrade Kit.....Add \$360

### VESA DELUXE SYSTEMS

#### ORCHID VLB SYSTEMS

|                |         |
|----------------|---------|
| 486DX-33/256K  | \$1,548 |
| 486DX-50/256K  | 1,698   |
| 486DX2-66/256K | 1,748   |

### SYSTEM CONFIGURATION

- Orchid VLB Motherboard
- Orchid Fahrenheit VLB w/1MB
- VLB IDE Controller w/2S/1P/1G
- 4MB High Speed RAM
- 212MB Fast Hard Drive
- 1.2MB Floppy Drive
- 1.44MB Floppy Drive
- 15" Non-Interlaced Monitor
- Focus 9000 Keyboard
- Medium Tower Case w/PS

### OPTIONS

- 170MB Hard Drive.....Less \$20
- 250MB Hard Drive.....Add \$30
- 340MB Hard Drive.....Add \$80
- 540MB Hard Drive.....Add \$310
- 17" Non-Interlaced Monitor.....Add \$300
- Sound Blaster Pro Deluxe.....Add \$118
- 250MB Tape Back-up.....Add \$140
- Sony CD-ROM.....Add \$160
- CD ROM Upgrade Kit.....Add \$360

### BEST BUY NOTEBOOKS

#### ACTIVE COLOR MATRIX

|           |         |
|-----------|---------|
| 486DX-33  | \$2,998 |
| 486DX-50  | 3,198   |
| 486DX2-66 | 3,298   |

### STANDARD FEATURES

- 4MB RAM expandable to 20MB
- 120MB Hard Drive (200MB, 340MB Hard Drives available)
- 1.44MB Floppy Drive
- 2S/1P/1G
- One External SVGA Port
- One External FDD Port
- One External Keyboard Port
- One 100 - PI N Expansion Port
- 120V/240V AC/DC Adapter
- Built-in Trackball

#### PAPER WHITE MONO

|           |         |
|-----------|---------|
| 486SX-25  | \$1,628 |
| 486DX-33  | 1,798   |
| 486DX-50  | 1,998   |
| 486DX2-66 | 2,098   |



# Why do smart customers keep buying from HI-TECH USA? Simply because we deliver the best values.

Call and join our smart customer list: ABC, ADAPTEC, ALLIED SIGNAL, AMD, AT&T, CIRRUS LOGIC, DATAQUEST, FLORIDA STATE UNIVERSITY, GENERAL ELECTRIC, IIT, INTEL, LAWRENCE LAB, MAXTOR, NASA, NATIONAL SEMICONDUCTOR, PG&E, QUANTUM CORP, SEAGATE TECHNOLOGY, SIEMENS SEMICONDUCTOR, STANFORD UNIVERSITY, SUN MICROSYSTEMS, U.C. BERKELEY, WESTERN DIGITAL, YALE UNIVERSITY, and many, many more.

## HI-TECH USA — WIDE CHOICES AT LOW PRICES

### CASE WITH POWER SUPPLY

|                                            |      |
|--------------------------------------------|------|
| Mini Tower Case w/200W Power Supply.....   | \$48 |
| Desktop AT Case w/200W Power Supply.....   | 50   |
| Medium Tower Case w/230W Power Supply..... | 78   |
| Full Tower Case w/250W Power Supply.....   | 98   |

### CD-ROM / MULTIMEDIA

|                                                             |           |
|-------------------------------------------------------------|-----------|
| Creative Labs                                               |           |
| MIDI Kit.....                                               | \$40      |
| Sound Blaster.....                                          | 60        |
| Sound Blaster Pro.....                                      | 102       |
| Sound Blaster Pro Deluxe.....                               | 114       |
| Sound Blaster 16 ASP.....                                   | 193       |
| CD ROM Upgrade Kit.....                                     | 358       |
| Discovery CD 8 Upgrade Kit.....                             | 368       |
| Discovery CD 16 Upgrade Kit.....                            | 438       |
| Edutainment CD 8 Upgrade Kit.....                           | 458       |
| Edutainment CD 16 Upgrade Kit.....                          | 498       |
| Mitsumi CD-ROM (350MS).....                                 | 156       |
| NEC CD-ROM 84 / 74 (Int./Ext.).....                         | 392 / 554 |
| SONY CD-ROM 31A.....                                        | 156       |
| TEXEL                                                       |           |
| DM3024N (SCSI) Internal.....                                | 338       |
| DM5024 (SCSI) External.....                                 | 448       |
| Toshiba XM-3401B (200ms).....                               | 386       |
| Trantor SCSI Host w/Driver.....                             | 68        |
| Audio Pak (Sound Card, Speaker,<br>Joystick, Earphone)..... | 58        |
| Deluxe Speakers.....                                        | 10        |

### CD SOFTWARE TITLES

|                                        |    |
|----------------------------------------|----|
| American Bus Phone Book-1992.....      | 19 |
| Animals v1.0 DOS.....                  | 16 |
| Annabel's Dreams-Egypt.....            | 67 |
| Arthur's Teacher Trouble.....          | 22 |
| Atlas Pak v3.1 World/US.....           | 20 |
| Barron's College Guide.....            | 18 |
| Battle Chess DOS.....                  | 16 |
| Beyond the Wall of Stars.....          | 20 |
| Beauty & Beast MPC.....                | 14 |
| Beats the World to Your Senses.....    | 12 |
| Campton's Family Encyclopedia.....     | 35 |
| Campton's Encyclopedia MPC.....        | 60 |
| Carmen San Diego DOS.....              | 20 |
| CD Game Pack II DOS.....               | 19 |
| CD Storytime DOS.....                  | 16 |
| Chess master 3000 MPC.....             | 17 |
| CIA World Fact Book DOS.....           | 17 |
| Composer Quest MPC.....                | 27 |
| Desert Storm MPC/MAC.....              | 18 |
| Dictionary of the Living World.....    | 25 |
| Dinosaur Adventure.....                | 21 |
| Electronics Home Library.....          | 25 |
| Family Choice/Britannica DOS.....      | 18 |
| Family Doctor DOS/MAC.....             | 18 |
| Family Education Collections DOS.....  | 18 |
| Great Cities-Vol 1 / Vol 2 DOS.....    | 18 |
| Guinness Disk of Records MPC.....      | 19 |
| Jets & Props MPC.....                  | 19 |
| Jones in Fast Lane MPC.....            | 15 |
| Killer Truck CD-Music Library.....     | 17 |
| King's Quest V DOS.....                | 15 |
| Kodak Photo CD Access.....             | 15 |
| Language of the World.....             | 30 |
| Library of Future 1st DOS.....         | 44 |
| Loom From Lucas Film DOS.....          | 15 |
| Lotus 123 v3.1 MPC.....                | 78 |
| Macmillan Dictionary For Children..... | 22 |
| Macromedia Action for Windows.....     | 26 |
| Mantis Experimental Fighter.....       | 13 |
| Mario is Missing/World Atlas 3.2.....  | 17 |
| Mavis Teaches Typing MPC.....          | 17 |
| Mayo Clinic Family Health.....         | 17 |
| Media Clips - 4 Pk MPC/MAC.....        | 38 |
| Microsoft Bookshelf MPC.....           | 50 |
| Microsoft Works MPC.....               | 50 |
| MIDI Music Shop.....                   | 17 |
| Mixed-up Mother Goose MPC.....         | 17 |
| Monkey Island DOS.....                 | 17 |
| MPC Audubon's Birds.....               | 16 |
| MPC Audubon's Mammals.....             | 16 |
| National Geographic Mammals DOS.....   | 21 |
| National Park.....                     | 18 |
| Ocean Digital Imagery VI DOS.....      | 20 |
| PC-SIG 11th ED DOS.....                | 18 |

|                                       |    |
|---------------------------------------|----|
| PC SIG 12th Edition.....              | 24 |
| Peter & Wolf MPC.....                 | 14 |
| Playing with Language (English).....  | 22 |
| Playing with Language (French).....   | 22 |
| Playing with Language (German).....   | 22 |
| Playing with Language (Japanese)..... | 22 |
| Playing with Language (Spanish).....  | 22 |
| Publish It 2.0 DOS.....               | 20 |
| Secret Weapons/Luftwaffe DOS.....     | 15 |
| Sherlock Holmes DOS.....              | 15 |
| Sleeping Beauty.....                  | 16 |
| So Much Shareware II DOS.....         | 14 |
| So Much Shareware III DOS.....        | 20 |
| Sound Library MPC.....                | 13 |
| Space Adventure.....                  | 23 |
| Space Quest IV By Sierra DOS.....     | 20 |
| Space Shuttle.....                    | 19 |
| Sport's Best (3 in 1) DOS.....        | 18 |
| Stellar 7 DOS.....                    | 15 |
| Survey of Western Art MPC.....        | 24 |
| The Seventh Guest.....                | 18 |
| The Right College.....                | 20 |
| The Shareware Concept.....            | 15 |
| Time Almanac 1991 DOS.....            | 17 |
| Time Table of History DOS.....        | 15 |
| Tool Works Reference Library.....     | 18 |
| Tool Works Encyclopedia MPC.....      | 42 |
| Total Baseball DOS/MAC.....           | 17 |
| US Atlas v3.1 MPC.....                | 14 |
| US Atlas & Automap DOS.....           | 20 |
| US History DOS/MAC.....               | 18 |
| USA Wars: Civil War DOS/MAC.....      | 26 |
| USA Wars: Vietnam DOS/MAC.....        | 26 |
| USA Wars: WW II DOS/MAC.....          | 26 |
| USA Wars: Korea.....                  | 26 |
| Who Killed Sam Rupert.....            | 24 |
| Wild Places DOS.....                  | 12 |
| Willy Bearish The Adventure.....      | 18 |
| Wing Command & Ult VI DOS.....        | 20 |
| Wizard PC/MAC.....                    | 13 |
| World Atlas v3.2 MPC.....             | 14 |
| World View DOS.....                   | 12 |

### CONTROLLERS

|                                                |      |
|------------------------------------------------|------|
| IDE 2FD/2HD with 2S/1P/1G.....                 | \$13 |
| IDE with I/O for VESA Local Bus.....           | 36   |
| Adaptec                                        |      |
| 1542C (SCSI).....                              | 188  |
| 1542CK w/Kit (SCSI).....                       | 230  |
| 1742A EISA (SCSI).....                         | 328  |
| 2742 EISA (SCSI).....                          | 318  |
| 2742TK EISA (SCSI).....                        | 358  |
| Asus EISA SCSI (Cache Expandable to 16MB)..... | 264  |
| BusLogic 742A EISA (SCSI).....                 | 264  |
| BusLogic 445S VLB (SCSI).....                  | 264  |
| DTC 2290 EISA IDE.....                         | 124  |
| DTC 2280 ISA IDE.....                          | 19   |
| DTC 2270 VLB IDE.....                          | 94   |
| DTC 3290 EISA SCSI.....                        | 428  |
| Promise DC-200 IDE Cache Controller.....       | 96   |
| Promise DC-4030 VLB IDE Cache Controller.....  | 138  |

### HARD DRIVES

|                                  |            |
|----------------------------------|------------|
| 40MB 25MS / 80MB 19MS IDE.....   | \$98 / 138 |
| 120MB 19MS / 130MB 15MS IDE..... | 154 / 158  |
| 170MB 17MS / 212MB 15MS IDE..... | 166 / 192  |
| 250MB 15MS / 340MB 12MS IDE..... | 206 / 268  |
| 420MB 12MS / 540MB 12MS IDE..... | 378 / 498  |
| 212MB 15MS SCSI.....             | 238        |
| 340MB 13MS SCSI.....             | 368        |
| 520MB 12MS SCSI.....             | 548        |
| 877MB 12MS SCSI.....             | 748        |
| 1.2GB 13MS SCSI.....             | 848        |
| 1.7GB 13MS SCSI.....             | 1,118      |

### KEYBOARDS

|                                       |         |
|---------------------------------------|---------|
| Focus                                 |         |
| FK2001 101-Key Click.....             | \$35    |
| FK9000 Programmable w/Calculator..... | 56      |
| Keytronics 101-Key Enhanced.....      | 30      |
| Mitsumi 101-Key Enhanced.....         | 16      |
| Maxiswitch 101-Key Enhanced.....      | 24      |
| Northgate                             |         |
| OMNI 101 NI / 102.....                | 62 / 62 |
| OMNI Ultra T or F.....                | 84      |

### MATH COPROCESSORS

|               |      |
|---------------|------|
| 387DX-40..... | \$54 |
| 387DX-33..... | 53   |
| 387SX-33..... | 52   |
| 387SX-25..... | 51   |

### MODEMS & FAXES

|                                       |      |
|---------------------------------------|------|
| 2400 Modem (w/9600 Send Fax).....     | \$25 |
| Fax Modem (9600 Fax/2400 Modem).....  | 40   |
| Fax Modem (14,400 Fax/14,400Mdm)..... | 122  |
| Pocket Fax Modem (14,400/14,400)..... | 204  |
| Hayes                                 |      |
| Accura 14400 Fax Modem Int.....       | 218  |
| Accura 14400 Fax Modem Ext.....       | 244  |
| Optima 14400 Fax Modem.....           | 358  |
| US Robotics                           |      |
| Sportster 9600 Modem Int.....         | 144  |
| Sportster 14400 Modem Int.....        | 148  |
| Sportster 14400 Modem Ext.....        | 168  |
| Sportster 14400 Fax Modem Int.....    | 158  |
| Sportster 14400 Fax Modem Ext.....    | 176  |

### MONITORS

|                                     |       |
|-------------------------------------|-------|
| 14" Mono Amber.....                 | \$80  |
| 14" VGA Mono.....                   | 106   |
| 14" VGA (640x480) 51.....           | 172   |
| 14" Super VGA 1024x768 39.....      | 192   |
| 14" Super VGA 1024x768 28 Int.....  | 224   |
| 14" Super VGA 1024x768 28 NI.....   | 244   |
| 15" Super VGA 1280x768 28 NI.....   | 344   |
| 17" Super VGA 1280x768 26 NI.....   | 638   |
| ADI                                 |       |
| 4G 15" 1280x1024 28.....            | 414   |
| CTX                                 |       |
| 14" Super VGA 1024x768 28 Int.....  | 248   |
| 14" Super VGA 1024x768 28 NI.....   | 266   |
| CMS1561 15" 1024x768 28 NI.....     | 378   |
| CMS1561LR 15" 1024x768 28 NI.....   | 398   |
| CPS1760 17" 1280x1024 28 NI.....    | 698   |
| CPS1760LR 17" 1280x1024 MPR II..... | 798   |
| Hitachi                             |       |
| CM1584MV 15" 1280x1024 28 NI.....   | 448   |
| CM2095 20" 1280x1024 28 NI.....     | 1,284 |
| CM2187M 21" 1600x1280 Microp.....   | 2,088 |
| MAG                                 |       |
| MX15F 15" 1280x1024 28 NI.....      | 456   |
| MX17F 17" 1280x1024 26 NI.....      | 908   |
| NANAO                               |       |
| F340IW 15" 1024x768 28 72Hz.....    | 654   |
| F550I 17" 1280x1024 28 NI.....      | 998   |
| F550IW 17" 1280x1024 28 75Hz.....   | 1,058 |
| T560I 17" 1280x1024 26 TRIN.....    | 1,638 |
| T660I 20" 1280x1024 31 72Hz.....    | 2,398 |
| F750I 21" 1280x1024 31 NI.....      | 2,048 |
| NEC                                 |       |
| 3FGe 15" 1024x768 28 NI.....        | 572   |
| 4FGe 15" 1024x768 28 NI.....        | 672   |
| 5FGe 17" 1024x768 28 NI.....        | 1,058 |
| 6FG 21" 1280x1024 28 NI.....        | 2,298 |
| SONY                                |       |
| 1304S 14" 1024x768 25NI.....        | 468   |
| 1430 14" 1024x768 25 NI.....        | 560   |
| 1604S 17" 1024x768 25 NI.....       | 888   |
| 1730 17" 1024x768 25 NI.....        | 958   |
| VIEWSONIC                           |       |
| 4E 14" 1024x768 28 Int.....         | 262   |
| 5E 14" 1024x768 28 NI.....          | 356   |
| 5+ 14" 1024x768 25 NI.....          | 448   |
| 6E 14" 1024x768 28 NI.....          | 282   |
| 7 17" 1280x1024 28 NI.....          | 858   |
| 15 15" 1280x1024 28 NI.....         | 468   |
| 17 17" 1280x1024 28 NI.....         | 1,038 |
| 20 20" 1600x1280 28 NI.....         | 1,644 |
| 21 21" 1600x1280 26 NI.....         | 1,898 |

### MOUSE

|                                    |         |
|------------------------------------|---------|
| 3-Button Microsoft Compatible..... | \$8     |
| Logitech                           |         |
| Cordless.....                      | 84      |
| Mouseman Serial/Bus.....           | 48 / 58 |
| Trackman.....                      | 74      |
| Scanman 256.....                   | 248     |
| Microsoft Mouse Serial/Bus.....    | 38 / 64 |

### NETWORK

|                                                  |      |
|--------------------------------------------------|------|
| 8 BIT Ethernet Cards (NE1000 Compatible).....    | \$43 |
| 16 BIT Ethernet Cards (10 Base-T/Coax).....      | 47   |
| 16 BIT Ethernet Cards (3-in-1 Combo).....        | 54   |
| 16 BIT Ethernet Cards (Pocket for Notebook)..... | 148  |
| 16 BIT Busmaster (NE2100 Compatible).....        | 88   |
| ANSEL                                            |      |
| P-NS2000-BA 10 Base-2 & AUI.....                 | 98   |
| P-NS2000-TA 10 Base-T & AUI.....                 | 88   |
| P-NS2000-3 10 Base-T & 2 & AUI.....              | 118  |
| ARCnet                                           |      |
| 4-Port Passive Hub.....                          | 15   |
| 8-Port Active Hub.....                           | 118  |
| Bus Topology 8 BIT ISA Card.....                 | 48   |
| Bus Topology 16 BIT ISA Card.....                | 58   |
| Star Topology 8 BIT ISA Card.....                | 48   |
| Star Topology 16 BIT ISA Card.....               | 58   |
| BootROM                                          |      |
| 8 BIT or 16 BIT Auto Boot PROM.....              | 15   |
| Hubs and Repeaters                               |      |
| 4-Port 10 Base T HUB.....                        | 148  |
| 6-Port 10 Base T HUB.....                        | 208  |
| 12-Port 10 Base T HUB.....                       | 438  |
| Daughter Card, 4 Additional RJ45 Ports.....      | 68   |
| Daughter Card, BNC+AUI Ports.....                | 58   |
| 2 BNC Ethernet Repeater.....                     | 198  |

### PRINTERS

|                                        |           |
|----------------------------------------|-----------|
| Citizen                                |           |
| GSX-190 (9-Pin).....                   | \$158     |
| GSX-230 / GSX-240 (24-Pin) Quiet.....  | 248 / 298 |
| GSX-145 (24-Pin) Wide.....             | 378       |
| Color Option for Citizen Printers..... | 48/68     |
| Panasonic                              |           |
| KX-P1150 (19-Pin).....                 | 138       |
| KX-P1624 (24-Pin) Wide.....            | 348       |
| KX-P2180 (9-Pin).....                  | 155       |
| KX-P2023 (24-Pin) Quiet.....           | 198       |
| KX-P2123 (24-Pin) Color Capacity.....  | 216       |
| KX-P2124 (24-Pin) Color Capacity.....  | 318       |
| KX-P2624 (24-Pin) Quiet Wide.....      | 378       |
| Color Upgrade Kit KX-PCK11.....        | 48        |

### TAPE BACKUP

|                                    |       |
|------------------------------------|-------|
| Conner 250MB Int.....              | \$136 |
| Colorado                           |       |
| DJ-10 Tape Back-up 120MB.....      | 134   |
| DJ-20 Tape Back-up 250MB.....      | 164   |
| KE-9 Ext. Kit for DJ-10/DJ-20..... | 64    |
| Tape QIC-80 3M DC2120.....         | 18    |
| JT-10 Trakker 120MB Ext.....       | 288   |
| JT-20 Trakker 250MB Ext.....       | 336   |
| PT-25 Power Tape 2.4GB Int.....    | 968   |
| PT-50 Power Tape 4GB Int.....      | 1,484 |

### VGA CARDS

|                                        |           |
|----------------------------------------|-----------|
| VGA256K / SVGA 512K 16 BIT.....        | \$25 / 35 |
| SVGA 1MB 1024x768 16 BIT.....          | 54        |
| Window Accelerators w/1MB.....         | 56        |
| Cirrus Logic VLB w/1MB.....            | 88        |
| Trident VLB w/1MB.....                 | 78        |
| ATI                                    |           |
| Graphics Ultra 1MB w/Mouse.....        | 164       |
| Graphics Ultra Plus 2MB.....           | 236       |
| Graphics Ultra Pro 2MB (ISA).....      | 314       |
| Graphics Ultra Pro 2MB (VLB).....      | 316       |
| Graphics Ultra Pro 2MB (EISA).....     | 358       |
| Diamond                                |           |
| Speed Star Pro 1MB (ISA / VLB).....    | 108       |
| Stealth 24 VLB 1MB.....                | 154       |
| Stealth Pro VLB 1MB (VRAM).....        | 258       |
| Stealth Pro VLB 2MB (VRAM).....        | 338       |
| Viper VLB 2MB.....                     | 364       |
| Genoa                                  |           |
| 8500 VLB 1MB.....                      | 98        |
| Number Nine (#9)                       |           |
| Level 10 (ISA).....                    | 298       |
| Level 11 (ISA / VLB).....              | 364       |
| Level 12 (ISA / VLB).....              | 434       |
| Orchid                                 |           |
| Celsius VLB 1MB (IIT).....             | 228       |
| Fahrenheit 1280 Plus 1MB (S3-801)..... | 136       |
| Fahrenheit VLB 1MB (S3-805).....       | 136       |
| Fahrenheit VA 1MB (S3-801).....        | 138       |
| Fahrenheit VA VLB 1MB (S3-805).....    | 148       |

### TERMS AND CONDITIONS

- One year parts and labor warranty on systems.
- Knowledgeable technical support engineers in service.
- Prices and availability subject to change w/o notice.
- Shipping, insurance and COD charges are extra and non-refundable. Prices reflect cash discounts.
- Return shipping must be insured, prepaid and bearing an RMA# on the shipping label.
- Defective items replaced or repaired at our discretion.
- No responsible for typos.
- All returns subject to 15% restocking fee and cover only Hi-Tech USA brand computers, excludes peripherals and software. No refunds after 30 days.
- Superior reputation for service, quality and value.
- Purchase orders are welcomed and subject to approval.

**SOUTH BAY**

Phone (408) 262-8688  
1558 & 1562 Centre Pointe Drive  
Milpitas, CA 95035 Fax (408) 262-8772

**HI-TECH  
USA**

**PENINSULA**

Phone (415) 508-8688  
9818 Industrial Road  
San Carlos, CA 94070 Fax (415) 508-0383



# USER GROUP NETWORK

## BULLETIN BOARDS

### MULTI-ZONE

**Adventures Online.** (408)985-1529, 732-4908; (415)321-3661, 365-7002, 573-1063, 244-9218; (510)797-4101. 24 hrs., Multi-user, interactive D&D style fantasy adventure game (similar to MUDD), chat on twelve lines. [Exp. #112.]

**The Career Network.** 1-800-734-7274. 7:30pm-2:30pm. 1200/2400. Job hunting? Now your resume can reach over 200 major employers each month. Sysop: Steven McCormick. [Exp. #115.]

**Dating Tree BBS.** (408)946-1431; (415)349-0961; (510)430-8675. 16 lines, online chat, email, match-making. Call for more access numbers. [Exp. #112.]

**First Online.** (408)247-1717; (415)598-0398, 992-3780; (510)254-5455, 862-2200. Over 30,000 files, 4.2GB, PC-SIG library, adult files. PC and compatibles. [Exp. #113.]

**HoloNet Internet Access BBS.** (510)704-1058; call for other nationwide numbers. 8-N-1, 24 hrs., 1200/2400/9600/14,400. Internet: telnet, FTP, IRC, MUDs. 3500+ Usenet groups. Free demo. [Exp. #114.]

**Interactions BBS.** (408)258-8913, (415)469-5510, (510)832-0560. Twelve line chat (over 18 only), email, shareware library, two week free trial. Sysop: C. Watson. [Exp. #113.]

**Lambda.** (415)572-2591, 755-9439; (510)268-9891. Adult, mostly gay/lesbian, all are welcome, email, chat, matching. Free trial. [Exp. #115.]

**Magic Kingdom Systems.** (408)245-3961, 253-2426; (510)440-0433. 18 lines, multiplayer interactive games, teleconference, email, over 3GB of files online, and more. [Exp. #114.]

**Mind Extension University BBS.** 1-800-688-6463. Distance education, discussions linking over 20 US universities, RIP Graphics, and more. Sysop: Jim Foss. [Exp. #115.]

**Paul Revere Network.** (408)947-7800, 281-0725; (510)803-0319. Nationwide 50+ node BBS network of grassroots firearms rights activists. PRNKIT.ZIP file for full node list. [Exp. #113.]

**Portal Communications.** (408)725-0561, (300-2400); (408)973-8091, (9600-57,600); (415)965-

8059, (300-57,600). World-wide X.25 online, shell, BBS & UUCP connections. Voice: (408)973-9111. [Exp. #114.]

**Pro-Line BBS.** (408)226-3880; (510)888-1130. 24 hrs., Chat, matchmaking, database lifestyles, email, and more. [Exp. #112.]

**SF Net.** (415)824-8747, 589-2194, 332-3923; (510)450-0155, 638-8644. Coffee House/Cafe Connection, 32 lines, public terminals, chat, matchmaker, msg areas, Fido 1:125/824, Internet mail. Voice: (415)695-9824. [Exp. #112.]

### 408

**#1 Fun Seekers.** (408)379-0958, 379-9680. 8-N-1, 24 hrs., IBM, lots of adult/other files, online games, classified ads, msg base. [Exp. #113.]

**A32 Macintosh Users Group BBS.** (408)378-8252. 24 hrs., 9600. Mac, FirstClass. [Exp. #115.]

**Adventure Sports BBS.** (408)241-7776. Discounts, info, and discussions on Adventure sports like paintball, bungee jumping, hang gliding, and more. Free, immediate access. [Exp. #113.]

**Amateur Action BBS.** (408)263-3393. 14,400. Adult Amateur GIF files, sixteen lines. [Exp. #113.]

**Autos Online.** (408)356-1306, 356-3866, 358-2010. 1200/2400. Shop Bay Area new car dealer inventories, private party for sale and wanted. Vehicle-related forums. No fee. [Exp. #115.]

**BayNar-Net.** (408)926-8547. 24 hrs., 2400. Model rocketry, astronomy, IBM programs, family-oriented, NAR affiliated. Sysop: Phil Hayton. [Exp. #112.]

**Careers Online.** (408)248-7029. 1200/2400/9600/14,400. Online job listing, resume fax service. Free to all. [Exp. #114.]

**The Checker Demon BBS.** (408)264-9018. 8-N-1, 14,400. Comic and RPG BBS! Focus on Hero Games products. Sysop: John Taber. [Exp. #114.]

**The Cocylus Lounge.** (408)241-9666. 8-N-1, 14,400. OS/2 files, message bases, VirtualNet@1408666, ChaosNet@4666. Sysops: Shmoo & Bassman. [Exp. #115.]

**Comp-U-Ease.** (408)286-8332. 2400/16,800. Engineering and CAD-related files and topics, regional hub for

RIME email network. [Exp. #115.]

**Cruzio.** (408)423-9995. 8-N-1, 1200/2400/9600/19,200. Santa Cruz, email, USENET newsgroups, calendar, agency & gov't. directory listings. Sysop: Chris Neklason & Peggy Dolgenos. [Exp. #112.]

**Data Port BBS.** (408)259-3019. 8-N-1, 24 hrs., 14,400. Internet email. OS/2 support, FidoNet, OS2net, RBBSnet. No fees. Sysop: Ian Robertson. [Exp. #113.]

**The Dark Side Of The Moon.** (408)684-2623. 24 hrs., 2400. Online games. Sysop: Riverwind. [Exp. #113.]

**Dr. Image BBS.** (408)453-6250, 453-6254. 1200/14,400. Huge file base for shareware & GIFs. SDN, SDS, Win\*Net, util, OS2Net. FidoNet 1:143/88. Sysop: Eric Ho. [Exp. #114.]

**Eat My Shorts.** (408)737-1885. 14,400. FidoNet, KinkNet, files, games, adult, etc. Sysop: Brewmaster. [Exp. #115.]

**Escape To Other Worlds BBS.** (408)956-1750. 8-N-1, 1200/2400/9600/14,400. SF/fantasy, comics, games, msgs., four lines, D/L files. Mac and PC GIFs, 2GB. [Exp. #115.]

**The Faxmachine BBS.** (408)295-7526. 8-N-1, 24 hrs., 2400-57,600. 10,000+ files & GIFs. Free access. [Exp. #114.]

**Grapevine BBS.** (408)970-9242. 300/1200/2400/9600/14,400. Quality files, tech support, adult files. Many areas free. [Exp. #114.]

**Gray Matter BBS.** (408)749-0740. 8-N-1, 14,400. MS-DOS shareware files, computer consulting, adult images. Adults only. [Exp. #115.]

**Higher Powered BBS.** (408)737-7040. 2400-16,800. Over 800MB of files, ILink, SmartNet, Intelc, SFNet, FredNet email conferences. [Exp. #115.]

**The Holodeck BBS.** (408)248-0869. 1200/2400/9600/14,400. Online games, FidoNet, IBM files, and GIFs. Home of W&W Communication Doorware. [Exp. #114.]

**The LaserBoard.** (408)268-4863, 268-6323. 24 hrs., 14,400 RIME, local TNET, and Wildnet conferences. Call and download the latest file available and best service around. Free. Sysop: Shawn Higgin. [Exp. #113.]

**Laser Light BBS.** (408)496-

0771. 8-N-1, 24 hrs., 2400/9600/14,400. IBM, best games in town! Apogee, EPIC, Moraff & MVP Release site. Sysop: Robert Mueller. [Exp. #112.]

**Links BBS.** (408)294-6933. 8-N-1, 2400. Online help for families of special needs children. Info, support. Free. [Exp. #115.]

**Mail Stop BBS.** (408)257-1919. 8-N-1, 24 hrs., 300/1200/2400/4800/9600/19,200. Free, private email and SIG system. Internet/voice mailboxes avail. Sysop: Dcarter. [Exp. #114.]

**The Meating Place BBS.** (408)926-6174. 24 hrs., 14,400. Gay/Bi, six lines, email, chat, matchmaker, GIFs, and more. System password: Micro. [Exp. #113.]

**Mongoose BBS.** (408)733-3034. 24 hrs., 14,400. SmartNet, adult files, latest sharewares on CD-ROM. Free. Sysop: Robert Yagmourian. [Exp. #115.]

**Monterey Gaming Systems.** (408)655-5555. 300/1200/2400/9600/14,400. 24 lines, conferences, email, messages, custom games. Free. [Exp. #115.]

**Moon Base Hq. BBS.** (408)248-3655. 24 hrs., 14,400. 2 CD-ROMs, doors, files, adult & non-adult msg base. Sysop: Reed Slockett. [Exp. #113.]

**Moose Is Loose BBS.** (408)773-9573. A fun place to message other adults. Sysop: John Giever. [Exp. #112.]

**The Mud Hole BBS.** (408)865-1621. 2 lines, msg door games. No files! [Exp. #113.]

**Nasty Playmates.** (408)374-2627. Adult social dating, all preferences, matchmaker, personal ads. Attach GIFs/files to mail. [Exp. #112.]

**Nitelog BBS.** (408)655-1096, 655-8294. 24 hrs., 300-16,800. DOS/Windows/OS2 adult files, 20 lines, 6.3GB. Sysop: Karl Van Lear. [Exp. #112.]

**PC-SIG BBS.** (408)524-9835. 8-N-1, 24 hrs., 2400/9600/14,400. PC-SIG entire software library plus all new programs reviewed on Shareware Magazine. [Exp. #112.]

**The Phoenix Islands BBS.** (408)270-4078. 2400/9600/14,400. RIME with large message base, IBM PC & MS DOS utilities, and more. Free.

## BAY AREA BBSes

By Kathleen Creighton

### GUNS ONLINE

**G**un control and gun ownership advocacy have to be among the hottest topics of contemporary American society. They're a natural topic for the online venue, and there is a Fido-type network called Paul Revere Network (PRN) whose goal is "to enhance the ability of Second Amendment Activists to share information and ideas. An attempt, really, to bypass the mass media bias against firearms and their ownership. We don't have radio and TV broadcast facilities, so we are using the phone company's 'narrowcast' capability."

If the subject matter interests you, take a look at sysop Leroy Pyle's PRN board in San Jose. (408/947-7800, 2400 baud, 8-N-1.) There's a lengthy, outdated newsletter (current issues are available as hardcopy for a subscription fee), including NRA news and calls for political action. This issue also chronicles the story of pro-gun police officer/sysop Leroy Pyle, and his onetime boss, the former San Jose Chief of Police and gun-control advocate, Joseph McNamara. In the bulletin area alone, there is plenty to read.

There are lists of Second Amendment advocacy groups, clubs and organizations, and detailed advocacy information for your next debate. If that's not enough, the content of most of the board's 90 Most Popular Files could keep the debate raging on for months.

The message areas include a few appropriate echoes from Fidonet and Usenet and most seem to be heavily traveled. For folks interested in the subject matter, there's a lot going on here.

Other Northern California BBSes which carry PRN message areas are (a complete national list is available online):

**The Silhouetter BBS,** Stockton, sysop Daniel Hagerty, (209)472-0843

**Central Processing Unit,** San Jose, sysop Scott Brown, (408)281-0725

**LadyColt Women's Forum,** San Jose, sysop Masako Young, (408)243-8760

**PRNet/SF Eastbay,** Fremont, sysop Leroy Pyle, (510)791-8246

**The City of Tanelorn,** Dublin, sysop Ray Coffay, (510)803-0319

**Highsierra Online,** Lake Tahoe, sysop Frank Gaude, (916)577-4438

**PRN/Sacramento,** sysop Ed Worley, (916)446-3221

### THE POWDER KEG BBS

Log on to The Powder Keg BBS (707/427-1310, 2400 baud, 8-N-1) for a passionate pro-gun ownership advocacy message from sysop Peter Nesbitt. It reads, in part, "There is an image problem with the pro-gun people in my opinion. Many of my friends and coworkers believe that gun owners are a bunch of red-necks. We need to let

Continued

Continued



# BBSes continued...

Sysop: Phan Tram. [Exp. #115.]

**PIM Data Line!** (408)448-3060. 8-N-1, 14,400. Win games, fonts, utils. MicroPatent support. All free. Sysop: Wayne C. Brown. [Exp. #112.]

**Praise Chapel Of Santa Clara ANSI-BBS.** (408)747-0192 8-N-1, 2400. Christian topics, files, and discussions. Running TAG. Sysop: [Exp. #113.]

**RCLabs BBS.** (408)732-2850. AutoCAD and 3D Studio related files and topics. [Exp. #114.]

**Ring Of Fire BBS.** (408)739-8753. Home for United Sysop's Association and Silicon Valley Novell Users Group. Since 1982. Hub for USAnet. Sysop: Bill Strouse. [Exp. #113.]

**The Rising Storm.** (408)739-8693. 8-N-1, 14,400. Emergency preparation, firearms, politics, and more. Survival echos and files. Sysop: Kirk DeHaan. [Exp. #115.]

**Risque Business.** (408)776-1841. 16,800. Premium adult graphics. [Exp. #113.]

**The Silicon Valley Christian Connection.** (408)246-7002. 300/1200/2400/9600/14,400. NewLife Net, Christ World Echo Mail, files, MIDI, GIFs of the Holy Land. Free access. [Exp. #112.]

**The Silicon Valley Christian Connection.** (408)246-7002. 300/1200/2400/9600/14,400. NewLife Net, Christ Net, 1GB of files and custom GIFs. All are welcome. Free access. [Exp. #115.]

**The Support Network BBS.** (408)259-0297. 10:00 am-midnight daily, 8-N-1, 1200/2400/9600. Community

computing for Santa Clara County. Sysop: Frank Arnold. [Exp. #114.]

**Syner Chat STS-14.** (408)929-1980. 24 hrs., 300/1200/2400. twelve lines, teleconferencing, nationwide linking. Free two week trial membership. Sysop: Joe Boo. [Exp. #112.]

**Third Dimension BBS Of Pioneer HS.** (408)267-9621. 300/1200/2400/9600/14,400. Everyone welcome. Atari, IBM, and Mac file/message bases, 130 megs, GIFs/MODs. Free. Sysop: Jake Jones. [Exp. #115.]

**Thunder Mountain BBS.** (408)266-4553. 8-N-1, 300/1200/2400. five lines, chat, email, matchmaker, files for all. Free. Sysop: David Alvarado. [Exp. #112.]

**The Virtual Reality BBS.** (408)246-5434. 8-N-1, 9600. Msgs, files, CD-ROM. Free. Sysop: Jim Busby. [Exp. #113.]

**The Warrior Realm BBS.** (408)287-3945. 8-N-1, 24 hrs., 300/1200/2400/9600. Multiplayer doorgames & FRP, IBM files, and fun. Sysop: Mark Barrow. [Exp. #114.]

## 415

**ABACUS BBS.** (415)587-8062. 8-N-1, 24 hrs., 300/1200/2400. Supporting Atari 8-bit, ST/STE/TT030/Falcon030 computers. Msg bases and files avail. Free. Sysop: [Exp. #113.]

**AHA Hydrogen BBS.** (415)494-3116. 8-N-1, 1200/2400/9600/14,400. Alt. energy info—prosperity without pollution. [Exp. #113.]

**Airtight Garage.** (415)641-0348. FidoNet msg. areas,

SIGs in science fiction, motorcycling, etc. Free. Sysop: Carlos Benitz. [Exp. #112.]

**Amiga Station San Francisco BBS.** (415)824-8774. 24 hrs., 300/1200/2400. TBBS supporting the Commodore Amiga. Free reg. Sysop: Richard Gaikowski. [Exp. #112.]

**Anatomically Correct BBS.** (415)856-8425. 24 hrs., 2400. Discussions of adult issues, more than 100 stories. No GIF files. Sysop: Howieird. [Exp. #112.]

**A.S.D.I.P.** (415)468-3886. 14,400. We are new, deal in adult issues, and offer a free test drive. two lines, over 2GB online. [Exp. #115.]

**The Back Door.** (415)756-6238. 24 hrs., 300/1200/2400/9600/14,400. 49 lines, separate Gay, Lesbian, and Straight sub-systems. 18 and over only. Now offering Internet and FidoNet. [Exp. #114.]

**Bay Area Bird Registry.** (415)771-1788. Lost and found birds. UserName=BLRD, Pwd=LOVER. Sysop: Walt Perko. [Exp. #114.]

**The Board With No Name North.** (415)826-9626. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Gay male BBS, chat, OMNChat, email, library, GIFs, and fantasy text. [Exp. #115.]

**California OnLine!** (415)331-4081. 9 lines, "California ChatLine", file/msg database, Internet, games. Free & reg access. Sysop: Jim. [Exp. #112.]

**Career Connections.** (415)917-2129, 917-2125. 8-N-1, 24 hrs. View and respond online to career opportunities. Free. Sysop: S. Dave. [Exp. #114.]

**The Classified BBS.** (415)665-7918, 665-2475. 8-N-1, 24 hrs., 14,400. For-sale, echo mail, files, and more. FidoNet, Internet, USENET, TCalnet, Kinknet.

## PACIFIC EXCHANGE

"Full Featured BBS"

- 50,000 DOS/Window files
- 10,000 Adult Files
- 12 Incoming Data Lines
- USA Today News
- On-Line Shopping Mall
- Support to 38,400 bps
- User Interactive Games
- Teleconferencing
- 68 Different SIG's
- Classified Ads & More

Full Access - \$25/Year



408 - 946 - 8561

[Exp. #113.]

**Clipboard.** (415)239-0454. 12pm-12am. 14,400. Clipper files, FidoNet, Internet, Intellec newsgroups and conferences (job listings, for sale), and doors. Sysop: George Jereza. [Exp. #114.]

**Computer Show Hotline.** (415)340-9370. 8-N-1, 1200/2400. Latest Computer Show info. Complete list of dates, times, locations, and directions. [Exp. #113.]

**Contractors Exchange BBS.** (415)334-7393. 8-N-1, 24 hrs., 2400. Jobs, leads, software for the contractor. Sysop: George Salet. [Exp. #112.]

**Corner UNIX.** (415)564-8750. 8-N-1, 1200/2400/9600/14,400. San Francisco Public Access UNIX. Full USENET/Internet email. [Exp. #114.]

**CPP MultiMedia BBS.** (415)665-1546. 24 hrs., 300/1200/2400/9600/14,400. Multimedia, GIFs, sound, Windows, credit help, pets. Sysop: Mike Clements. [Exp. #113.]

**Creekside BBS.** (415)343-5692. 1200/2400/9600/14,400. Genealogy- and history-based files and messaging. Intellec, Seeknet, Science Factor Net, GTPowerNet. [Exp. #115.]

**CyberNET.** (415)512-9423. 24 hrs., 2400-38,400. All Macintosh Telefinder GUI interface, FidoNet, hi-tech and beyond. Free. [Exp. #114.]

**DPNet BBS.** (415)788-8663. 8-N-1, 300/1200/2400/9600. Free consultant job listings, FidoNet conferences, Professional Computing organizations, and technical SIGs. [Exp. #114.]

**The Elfspire Tome BBS.** (415)595-2387. 1200/2400/9600. A Fantasy roleplaying G.M. resource bulletin board featuring roleplaying, games, fantasy clipart, and more. [Exp. #112.]

**The Energy Board.** (415)861-2510. 8-N-1, 12 pm-12 am. FidoNet/USENET environment and energy issues. Sysop: Roger Harried. [Exp. #114.]

**Eye Contact BBS.** (415)703-8200. 300/1200/2400/9600. Gay men's issues, 70 lines, chat, matchmaker, over 20,000 files. 18 and over. Local access numbers nationwide. Sysop: Bill Montgomery. [Exp. #114.]

**Fog City.** (415)863-9697. 8-N-1. Gay & Lesbian community/chat, matchmaking, CD-ROMs, games. Internet email. [Exp. #114.]

**Fun University Network.** (415)327-4591. 8 lines. Free graphical interface, hosted

multi-player simulation games, current events focus. Sysops: Wendie, Mike, Lisa, and Scott. [Exp. #114.]

**Golden Gate Computer Society BBS.** (415)927-1216. 24 hrs., 1200/2400/9600/14,400. Four lines, ILink, CalLink, and USENET. d/I OK on first call. [Exp. #113.]

**Graveyard Shift BBS.** (415)923-9060. 1200/2400/9600/14,400. All adult only, XXX txt, GIF, original animation, TrobNet, SexNet. three lines. [Exp. #114.]

**Guideboard.** (415)864-3858. 24 hrs., 300/1200/2400. Multiline, Cabbie's Guide to SF restaurants, doctors, auto repair, etc. Sysop: Dick Schwartz. [Exp. #113.]

**Hispanic OnLine Access.** (415)252-0285. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Hispanic issues, software, business. Free. [Exp. #112.]

**IBBS West.** (415)564-9996. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. 4 lines, PC and compatibles, shareware, utils., adult GIFs, CD-ROM, 13,000 files. \$\$\$. [Exp. #114.]

**The Informer BBS.** (415)468-6713, 468-6714, 468-6715. 24 hrs., 2400/9600/14,400. TCalNet, Intellec, FamNet, WindNet, Newlife, Operating Systems, tech specs, and more. Sysop: John Custer. [Exp. #115.]

**In Sync.** (415)507-9463. 14,400. Sysop: Tektronix. [Exp. #114.]

**Jesse Net.** (415)964-2449. Games, gifts, messages for kids. Answers after four rings. Sysop: Jesse Radin [Exp. #115.]

**The MIDI & Multimedia Exchange BBS.** (415)771-1788. .MOD, .MID, .VOC, .SAM, .AVI, .FLI & Synth Patch's. Sysop: Walter Perko. [Exp. #112.]

**The New Dork Sublime BBS.** (415)864-DORK, 255-NERD. Subliminal news for new dorks everywhere. NIR-VANAnet node 9:900/10. Sysop: Demented Pimiento. [Exp. #113.]

**Nexus BBS.** (415)681-5862. 24 hrs., 14,400. SciFi, Illuminati, ANIME, Visual Basic, CAD/Graphics. Free until Sept. 93. [Exp. #113.]

**NiteLite Remote BBS.** (415)965-8365 (Public Callers); 965-4097 (Members Only). 8-N-1, Internet email, FidoNet 1:143/214, doors, networked games. Sysop: Byron McKay. [Exp. #114.]

**Pacific Micro BBS.** (415)941-9699. 14,400. Free. [Exp. #113.]

**Recovery BBS.** (415)255-2188. 8-N-1, 300/1200/2400/

9600/14,400. Dedicated to 12 Step Recovery programs (AA, NA, Al-Anon, CoDA, SLAA, etc.). Fido 125/9. Sysop: Rich Gorin. [Exp. #114.]

**Robotic BBS.** (415)648-6427. 8-N-1. Software and msgs. for robot building enthusiasts. Sysop: Brad Smallridge. [Exp. #113.]

**Salt And Light BBS.** (415)368-0790, 252525. 8-N-1, 24 hrs., 2400. Bible/God questions answered by four ordained ministers. Bible study helps and more. Free. Sysop: Lorin Wilson. [Exp. #115.]

**The Shareware Exchange! BBS.** (415)992-2860. 8-N-1, 1200/2400/9600/14,400. Latest shareware IBM files, distribution site. Online games, msgs, and more. Sysop: Christopher Jong. [Exp. #113.]

**Smart BBS.** (415)369-8706. 24 hrs., 1200/2400. Small BBS, many online games, growing transfer sections. \$15 requested. [Exp. #114.]

**Starnet Connections.** (415)949-3133. 8-N-1, 24 hrs., 300/1200/2400/9600. Email, UNIX, USENET, UUCP, compilers, public domain software. Local to most 408 areas. Sysop: Richard Mahn. [Exp. #115.]

**Symmetrics BBS.** (415)382-6679. 8-N-1, 24 hrs., 1200/2400/9600/14,400. Online games and lots of shareware programs. [Exp. #113.]

**The System.** (415)365-1246. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Accounting, AccPac, BPI, Simply, Telemagic, Novell. Email, 600MB file area, and virus free. [Exp. #113.]

**Tangent.** (415)703-0150. Gay/bi social, adult only, local (Castro/SF) orientation, eight lines, free until November. [Exp. #115.]

**Toad Hall BBS.** (415)595-2427. 24 hrs. five nodes, 16,000 files. Intellec, RIME, ILink, and Smartnet networks. Subscription optional. Sysop: Gordon Anderson. [Exp. #114.]

**Uncle D's Directory.** (415)364-3001. 8-N-1, 24 hrs., 1200/2400/9600. Hearing-impaired and educational purposes, game doorways, RimeNet, and more. No fees. [Exp. #115.]

**/usr/school/BBS.** (415)564-8896. 7-E-1, 24 hrs., 1200/2400. How to access the Internet, C & UNIX classes. If garbage, press ctrl-@. Sysop: Dennis McMamara. [Exp. #114.]

**VA Listings.** (415)744-7793. 24 hrs., 300/1200/2400. VA-owned homes for sale. Multiline. Sysop: David Piersall.

Continued

**pathway**  
BBS

THE BEST JUST GOT BETTER.

Formerly West Coast Swinger's BBS, our name isn't the only thing that has changed. Take a look at us now.

- ✧ 16 lines running at 14.4k
- ✧ 7 fast CD-ROM drives online - 3 Shareware & 4 Adult
- ✧ Extensive collection of non-CD files & GIFs
- ✧ Now running TBSB software
- ✧ The hottest live chat in California!
- ✧ Message Bases for public and private conversations
- ✧ See classified ads from magazines before published!
- ✧ Online USA Today - instant access to news articles
- ✧ Very reasonable rates

(408) 956-5600



## BBSes continued...

[Exp. #112.]

**VidGame BBS.** (415)742-6441. 2400-16,800. 5500 GIFs, music files, online games, Windows, LAN, utils, computer news, 2.2GB. Sysop: George Hassmer. [Exp. #114.]

**Walking Thru Syrup.** (415)666-3249, 752-3614. A message based board with subs about homebrewing, coffee, and everything else. [Exp. #112.]

**Wetware Diversions Public UNIX.** (415)826-0397. 8-N-1, 24 hrs., 1200/2400. Full Usenet news, eight lines. Sysop: Eric Swason (editor@wet.UUCP). [Exp. #113.]

**Window World BBS.** (415)931-0649. 24 hrs. For people who use Windows-type software; info, shareware, chat. Sysop: Bob Cram. [Exp. #115.]

**Wine-Tasters BBS.** (415)459-1948. 24 hrs. Giga-byte stroll through US wines. Wine country events and more. [Exp. #115.]

### 510

**8-Bit Apple User Group.** (510)294-8052. 24 hrs., 300/1200/2400. Apple II support, email, messages, games, files. Free. Sysop:

Noel Anklam. [Exp. #115.]

**Activist.** (510)532-6248. Lots of conspiracy text files—CIA, KGB, FBI, JFK, RFK, MLK, NSA, ADL, MI5, etc. Sysop: Walter Alter. [Exp. #114.]

**Addtech BBS.** (510)623-7709. 1200/2400/9600/14,400. Huge file base for multimedia. FidoNet 1:143/126. Free. Sysop: Eric Ho. [Exp. #114.]

**Alpha Centauri BBS.** (510)947-5835. 24 hrs., Fantasy, msgs games, downloads, frisbie, etc. [Exp. #113.]

**Amiga Addicts Anonymous BBS.** (510)680-2850. 8-N-1, 24 hrs., 1200/2400/9600/14,400. Amiga files. Free. Sysop: Stanley R. [Exp. #114.]

**BayB—The Bay Area Baby Board.** (510)528-8164. 8-N-1, 14,400. Parents' support network: games, education, health, reviews. Free. Sysops: Lori and Derek. [Exp. #115.]

**Beyond Your Wildest Fantasy BBS.** (510)785-4312. 24 hrs., 1200/2400. Lrg online fame, file, and msg sections. [Exp. #113.]

**Blue Smoke CD-ROM BBS.** (510)455-5587. 24 hrs., 14,400. Access 15,000 files, FidoNet, RANet, email. No

ratio, free. [Exp. #112.]

**Breaking Walls; Building Bridges BBS.** (510)827-0804. 24 hrs., 300/1200/2400. HIV, LesBiGay, MCC, FidoNet, and HIV-Net. Sysop: Deacon DVMCC. [Exp. #112.]

**Bust Out BBS.** (510)888-1443. 24 hrs., 14,400. 9 nodes, 5GB, huge msg and file network including the Internet (many adult). Computer systems and software services. Sysop: Alex J. Riggs. [Exp. #113.]

**The CaddyShack II.** (510)451-1206. 1200-19,200. Specializing in Mac files. Sysop: Mikey. [Exp. #114.]

**Camphor Fountain BBS.** (510)547-5741. 8-N-1, Baha'i Network, nine FTS networks. Instant access, no fee. Sysop: Linda Martin. [Exp. #113.]

**Code Three Outfitters BBS.** (510)799-2921. 24 hrs., 14,400. Emphasis on amateur radio and law enforcement. WCLawNet, Dayton-HamNet. Free. Sysop: Kim Leong. [Exp. #115.]

**Compu-Ace RBBS.** (510)794-4029. 9600. FidoNet 1:215/739, BAY\_LINK member. Files,

games, msgs, and more. Sysop: Scott A. Mercer. [Exp. #113.]

**Creative Dimensions BBS.** (510)484-4944. 24 hrs., 1200/2400/9600/14,400. Home of CD-man and more. Free downloads on first call. [Exp. #115.]

**Dates.** (510)687-3633. 1200/2400/9600. Matchmakers, classified ads, online store for specialized application software, five nodes. Sysop: Max [Exp. #115.]

**The Dragonhead BBS.** (510)417-8718. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Online games, offline mail reader. Free. Sysop: Ray Khechen. [Exp. #113.]

**The Eagles Lair.** (510)671-2238. The Musician's BBS. Free listings, adds transfers, message base, Foxnet. [Exp. #115.]

**Ecclesia BBS.** (510)526-6584. 24 hrs., 1200. FC board, GUI for Mac and Windows. Homeschool Online Network. Kids welcome. Free. Sysop: Jason Rippetoe. [Exp. #113.]

**Elaine Thomas BBS.** (510)803-0800. 24 hrs., 2400/9600. Hi-Quality GIFs of amateur and professional models, home of "Bay Area Girl Next Door." [Exp. #114.]

**Entropic Sanctum.** (510)794-6586. 24 hrs., 1200/2400/9600/14,400. Dismantling the illusions of culture and society. Running the new Roboboard GUI platform. Come see the future. Free level. Sysop: The Oracle. [Exp. #114.]

**Fred Haney & Sons BBS.** (510)792-5119. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Shareware software. Free. [Exp. #113.]

**FrEdMail Oakland.** (510)834-2636. 1200/2400/9600. Educator/student network w/Internet mail access, OUSD Bilingual Ed support BBS. [Exp. #113.]

**FrEdMail SIndro.** (510)895-1785. 1200/2400/9600. Educator/student network with Internet mail access, San Leandro HS, NorCal Hub. [Exp. #113.]

Continued

## BBS Column continued...

the public know that we are from all walks of life. We are teachers, doctors, air traffic controllers, policemen, tile setters, designers, cooks, and an assortment of other professions, races, and religions. . . Let's join together, expound on our diversity and differences, and let the anti-gun people know that pro-gun people are numerous in number and that we will fight to preserve the 2nd Amendment."

The Powder Keg BBS seems to be geared more toward local and state advocacy, with discussions of California legislation and lists of California representatives. There is a large, varied file area, though, covering California-specific information, as well as national and international gun material. The message areas include Solano County Gun Talk, California Gun Talk, as well as NRA and PRN areas.

### THREAT MANAGEMENT INSTITUTE BBS

The name of this BBS is graphic and to the point. Co-sysop attorney Pete Kasler runs California Gun Law seminars and is the author of *Everything You Ever Wanted to Know About CALIFORNIA GUN LAWS*. Seminars are discounted for book purchasers; see the offer posted on the BBS.

There are message areas, including "Ask the Experts," but the file area requires validation in order to view. If you need information about California gun laws, though, this board is a great resource. (707/935-1713, 2400 baud, 8-N-1, Pete Kasler and Paul Theodoropoulos, co-sysops.)

### RISING STORM BBS

Rising Storm BBS has been reviewed here before, but people interested in gun ownership advocacy will find interesting areas here, too.

This board is a forum for information exchange between those individuals interested mainly in emergency preparation and survival, and it includes message areas in self-sufficiency and self-defense, and FidoNet law and order, firearms, and civil liberties echoes. Rising Storm BBS is also the only California node of Survnet, a small survivalist network, which includes survival and survival politics message areas. This BBS does not promote survivalist orthodoxy per se and participants with an interest in the subject matter but of different points of view are welcome. (408/739-8693 changes to 408/379-4329 as of 9/17, 2400 baud, 8-N-1, Kirk DeHann, sysop.)

Copyright © 1993 by Kathleen Creighton. All rights reserved.

## Amateur Action BBS

World's Largest Collection of Amateur Adult GIF Files.

Over 15,800 GIFs on line.

**New Member Bonus!!**

Receive a

**FREE Amateur Video!!**

**(408) 263-3393**

**(408) 263-1868**

**24 High Speed Lines**

US Robotics Dual Standard

Modems on all 24 lines

Easy Connection! No Waiting!



V.32 / 14400 HST



**CARLIQUE GRAPHICS**  
WORLD FAMOUS GIF'S  
ADULT CD'S  
FREE CATALOGS  
SUBSCRIBE ON-LINE  
408-847-0665

**CALIFORNIA ONLINE!**  
6.3 Gigs of Files  
&  
California ChatLine!  
14 Lines  
Local Numbers! and growing.  
**(415) 331-4081**  
No Time Limits!  
No Hourly Charges!

**NTELOG**  
20 Nodes  
OS2 • DOS • Windows  
& Image Files  
Internet • Usenet  
Rime • iLink Email  
(408) 655-1096 2400 bps  
(408) 655-8294 v.32bis  
(408) 655-8297USR HST  
Register Online  
VISA



# USER GROUPS

## ADOBE

**Adobe Technology Exchange: San Francisco Peninsula/South Bay Chapter.** Meetings: 2nd Wed., 7:00 pm, M&T Publishing, 411 Borel Ave., San Mateo. Call: ATX, (408)562-6104. [Exp. #112.]

## AMIGA

**AAA—Amiga Addicts Anonymous.** Meetings: 3rd Tues., Concord Water District Bldg., 1311 Concord Ave. Classes, monthly disks, info line. Call: (510)935-0829. [Exp. #115.]

**AUM—Amiga Users Of Marin.** Meetings: 3rd Wed., 7:30 pm, College of Marin Science Center, Rm. 191, Kentfield. Desktop Video SIG, Rm. 192, 6:00 pm. Call: (415)479-6717. BBS: (415)485-5895. [Exp. #115.]

**AWEST Amiga Users In SF.** Meetings: 1st Thurs., 7:00 pm, Laguna Honda School, Conference Rm., 1350 7th Ave., San Francisco. Call: (415)584-8406. BBS: (415)824-8774. [Exp. #115.]

**FAUG—First Amiga User Group.** Meetings: 1st Tues., 7:30 pm, HT Electronics, 275 N. Matilda Ave., Sunnyvale. Q & A, new product demos, public domain software. Call: Mike Fisher, (415)855-9816; BBS: (415)595-2479; Usenet: mikel@vid.hp.com. [Exp. #117.]

**Original Amiga User Group.** Meetings: 2nd Wed., Winners Circle Systems, 2618 Telegraph Ave., Berkeley. Call: Bob Krones, (510)653-5689. [Exp. #118.]

**RE—AMIGA Redwood**

**Empire Amiga User Group.** Meetings: 2nd Tues., 7:30 pm, Robert Park Jr. HS, RM. C-5, 7165 Burton Ave., Rohnert Park. Call: (707)523-9978. BBS: (707)795-2717. [Exp. #115.]

## APPLE

**PAUG—Peninsula Apple User Group.** Meetings: 3rd Thurs., 7:00 pm, Ampex Cafeteria, 411 Broadway, Redwood City. Beginners and advanced, question and answer, new product demos, public domain software. Call: (415)367-8657. [Exp. #118.]

**TVAUG—Tri-Valley Apple II User Group.** Meetings: 1st Wed., 7:00 pm, Glendale Federal Bank, 3101 Crow Canyon Rd., San Ramon. Software demonstrations, raffle, public domain software, question and answer session. Call: Jerry Carleton, (510)828-0959. [Exp. #118.]

## AT&T

**AT&T Computer User Group.** Meetings: 1st Wed., general discussion at 6:00 pm, main program at 7:00 pm, 50 Fremont St., 40th Floor, San Francisco. Call: Jim Lansing, (415)885-6631. [Exp. #117.]

**AT&T UNIX Computer User Group.** Meetings: 4th Wed., 6:30 pm, location varies. Call: Thad Floryan, (415)961-5157 or USENET: thad@cup.portal.com. [Exp. #117.]

## ATARI

**ABACUS (Atari Bay Area Users Society).** Meetings: 1st Sat. 10:00 am, Christ Church Lutheran, Quintara St. at 20th Ave., San Francisco. Supporting Atari computer users. MIDI and DTP SIGs. Call:

Riger Sinasohn, (415)469-7924. [Exp. #116.]

**Atari Unlimited.** National networking and support. Write: PO Box 691, Mountain View, CA 94042. Call: Patti Barbiero, (415)903-9787. [Exp. #117.]

**Bay Area Atari Users Group.** Meetings: 1st Mon., 7:30 pm, Agnews Aud., 2nd fl., San Jose. Write: c/o 3691 Eastwood Cir., Santa Clara 95054. Call: Joe Fischer, (408)988-3065. [Exp. #114.]

**DACE—Diablo Atari Computer Enthusiasts.** Meetings: 1st Thurs., Contra Costa Water District Bldg., 1331 Concord Ave., Concord. Call: Dan Galant, (510)689-8256. [Exp. #113.]

**STace—Atari Computer Enthusiasts.** Meetings: 3rd Thurs., 7:30 pm, AT&T Bldg., 3260 Sebastopol Rd., Santa Rosa. Call: Kim Remick, (707)795-8173. [Exp. #115.]

## COMMODORE

**C=HUG (Commodore Hayward User Group).** Meetings: 2nd Sat., 2:00 pm, Palma Ceia Park. (510)531-3734. [Exp. #117.]

**CWEST Commodore 64/128.** Meetings: 1st Sat., Excelsior Library, 4400 Mission, San Francisco. Call: (415)626-9946. [Exp. #116.]

## CONTACT MANAGEMENT

**Bay Area TeleMagic User Group.** Meetings: 4th Wed., 4:00 pm, Call: George Workman, (408)476-6385. [Exp. #115.]

## CORELDRAW

**CorelDraw User Group.** Meetings: 3rd Thurs., 6:00 pm, ACAD: Association of Corel Artists and Designers, Northern CA Chapter. Call: Matt O'Malley, 1-800-462-5763. [Exp. #114.]

## CP/M

**San Francisco Computer Society.** Meetings: 4th Mon., 7:00 pm, 7th Ave. Presbyterian Church, 1329 7th Ave., San Francisco. Call: Bob Forsberg, (415)885-6202. [Exp. #113.]

## DBASE

**Silicon Valley Access DB Developers Group.** Meetings: 2nd Wed., 7:00 pm, Call: Craig Bauer, (408)745-7600. Fax-On-Demand info: (408)745-0740. [Exp. #115.]

## DEC

**BayLUG.** Meetings: approx.

every six weeks. Users of DEC hardware. Call: Rich Taylor, (408)776-4978. [Exp. #114.]

## DESKTOP PUBLISHING

**Ventura Publishing User Group (formerly VPUG).** Meetings: 3rd Mon. (Sept.–May), 6:45 pm, 1800 Rollins Rd., Rm. 14, Burlingame. Call: Elinor Cruz, (415)366-5317. [Exp. #117.]

## IBM AND COMPATIBLES

**Berkeley PC User Group.** Meetings: 2nd Tues., 7:00 pm, Winners Circle Systems, 2618 Telegraph Ave., Berkeley. No charge, newsletter \$24/yr, free PD library, beginner SIG, GeoEnsemble SIG. Call: Mel Mann, (510)526-4033. [Exp. #117.]

**EastBay FOG.** Meetings: 2nd Wed., 7:30 pm, Episcopal Church of St. John-in-Montclair, 1707 Gouldin Rd., Montclair. All microcomputers, MS-DOS, CP/M. Call: (510)653-2627. [Exp. #116.]

**Fremont PC User Group.** Meetings: Tuesday, September 28, 6:00 pm, Fremont Central Library. Topics: latest in public domain CD-ROMS & how to install a CD-ROM drive. Call: (510)795-4286 ext. 7. BBS: (415)652-1736. [Exp. #118.]

**Golden Gate Computer Society.** Meetings: 4th Mon, 7:00 pm, San Rafael Community Center, 618 B St., San Rafael. Free intro to computers class at 6:00 pm. Call: (415)927-2909. [Exp. #116.]

**PC Clubhouse.** Meetings: 1st Fri., 7:30 pm, Meiklejohn Hall, CSU Hayward. To share knowledge and PD/shareware software. Club has several BBSes in East Bay and Amador Valley. Call: (510)483-9500, 429-1007. BBS: (510)889-1932 (Hayward). [Exp. #112.]

**San Francisco Business Computers.** Meetings: 4th Tues., 5:30 pm. For those who use computers in business. Visitors \$5. Call: Jordan Rosenberg, (415)788-5338. [Exp. #117.]

**San Francisco PC Users Group.** Meetings: 3rd Tues., 6:15 pm SIGs, 7:30 pm General Meeting. Fort Mason, Bldg. A. Call: (415)979-5879. [Exp. #114.]

**Silicon Valley Computer Society—SVCS.** Meetings: 2nd Wed., 7:30 pm, Hewlett-Packard, Bldg. 48,

Oak Room, 19483 Pruneridge Ave., Cupertino. Call: (408)956-0864. BBS, (408)956-0317. [Exp. #113.]

**South Bay WordPerfect User Group.** Meetings: Monthly, dates vary. Saratoga Community Library. Free. Call: Martin Van Derpool, (408)238-8434. [Exp. #113.]

**Stanford Palo Alto Area User Group.** Meetings: Last Wed., 7:30 pm, Varian Aud., 3075 Hansen Way, Stanford. DOS/Windows. Free. Call: (415)329-8252. [Exp. #117.]

## INTERFACE DESIGN

**IICS Human Interface SIG.** Meetings: Last Tues., Medius IV, 52 Colin P. Kelley Jr. St., Suite 101, San Francisco. Come join us for a rowdy probing of workable and non-workable interface designs. Call: (415)905-6959. [Exp. #115.]

## LAPTOPS

**HPX HP Laptops & Handhelds.** Meetings: 2nd Sat., Sunnyvale. Call: Michael Felsenstein, (415)564-8279. [Exp. #112.]

## LEGAL

**SF Bar Assoc. WordPerfect User Group.** Meetings: 3rd Wed., noon, SF Bar Assoc. Boardroom, 7th fl., 685 Market St. Brown bag meetings. Call: (415)421-5650. [Exp. #114.]

## MACINTOSH

**A32 Macintosh User Group.** Meetings: 2nd Sat., 10:00 am, Sunnyvale Community Center, 550 Remington Ave., Sunnyvale. Question and answer, guest speakers, disks-of-the-month, bi-monthly newsletter, \$35 annual dues. (408)263-0398. [Exp. #118.]

**BMUG—Berkeley Macintosh User Group.** Meetings: Every Thurs., 6:00 pm, Physical Sciences Lecture Hall, UC Berkeley Campus. Call: (510)549-BMUG. [Exp. #115.]

**Diablo Valley Macintosh User Group (DVMUG).** Meetings: 3rd Tues., 7:00 pm, Old Republic Title Co., 3000 Clayton Rd., Concord. Get together w/Mac and Performa users. Enjoyable SIG meetings. Call: (510)827-5775. [Exp. #116.]

**Gay Macintosh User Group.** Meetings: 4th Mon., 7:00 pm, New Conservatory Theatre, 25 Van Ness, San Francisco. GMUG is a nonprofit group open to everyone. Call: (415)552-GMUG. [Exp. #117.]

**International Macintosh User Group (IMUG).** Meetings: 3rd Thurs., 6:45 pm, location varies. A forum for multilingual computing. Call: Roger Sherman, (415)859-5146. [Exp. #116.]

**Macintosh SIG.** Meetings: 3rd Tues., 7:00 pm, Apple Computer, 4 Infinite Loop, Cupertino. Sponsored by Software Entrepreneurs' Forum. Call: Jeff Cherniss, (408)358-5150. [Exp. #117.]

**Macs Of Marin.** Meetings: Last Wed., 7:30 pm, Corte Madera Rec Center, 498 Tamalpais Dr., Corte Madera. Marin County Mac User Group for all levels of expertise, beginners welcome, SIGs. [Exp. #112.]

**PAUG—Peninsula Apple User Group.** Meetings: 3rd Thurs., 7:00 pm, Ampex Cafeteria, 411 Broadway, Redwood City. Beginners and advanced, question and answer, new product demos, public domain software. Call: Roger Laker, (415)367-8657. [Exp. #118.]

**SPC Apple User Group.** Meetings: 2nd Wed., 7:30 pm, Fremont Main Public Library, 2400 Stevenson Blvd. Call: Dean Fearn, (510)881-9160. [Exp. #112.]

**Stanford Macintosh User Group (SMUG).** Meetings: 1st Mon., 7:00 pm. Call: (415)363-2446. [Exp. #116.]

## MARKETING

**Marketing SIG.** Meetings: 4th Thurs., 7:00 pm, Cubberley Community Center, Rm. H-1, 400 Middlefield Rd., Palo Alto. SIG of Software Entrepreneurs' Forum. Call: Bill Ryan, (415)615-7906. [Exp. #117.]

## MULTIMEDIA

**Design SIG.** Meetings: 3rd Tues., 6:00 pm. For independent businesspeople in graphic arts and word processing. Topics related to running own business. Call: Bill Brent, (415)282-7368. [Exp. #118.]

**International Interactive Communications Society—IICS.** Meetings: 2nd Tues., 7:00 pm, alternate locations San Francisco and South Bay. For people involved or interested in developing and using interactive multimedia technologies. Call: IICS Hotline, (415)252-8114. [Exp. #113.]

**Macromedia User Forum.** Meetings: 1st Wed., 7:00 pm, 600 Townsend, at 7th St., San Francisco. Authoring, 3-D, content, and tools. Call: John Dowdell, (415)665-3916 (days); email: 71165.3065@compuserve.com. [Exp. #112.]

Continued

# Windows OnLine™

FILES BY MODEM

MAIN MENU

Files Windows NT OS/2 DOS Mail Bulletin News Magazines

**NOT JUST BIGGER... BETTER!**

The Latest Software by Modem / BBS

**10,000+ QUALITY Win3.x Files**

1,300 OS/2 & 20,000 DOS Files

**+ PLUS +**

**NEW PC-SIG CD**

**600 MEGS OF Windows Files**

**FREE**

(Free CD to New Gold Members - \$19.95 to other Members - Supplies Limited)

**CALL 510-736-8343 Modem**

14,400 BPS On All Lines - No Speed Surcharges

510-736-4376 Voice/Fax

Publisher Of The Popular "WinOnLine Review" and the "WinOnLine Review, Shareware Edition"

NO ON-LINE HOURLY CHARGES - NO BUSY SIGNALS 7 GIGS



## USER GROUPS continued...

**Multimedia SIG.** Meetings: 1st Thurs., 7:00 pm. SIG of Software Entrepreneurs' Forum. Call: Ralph Gilman, (408)746-0551. [Exp. #115.]

**Multimedia User Group.** Meetings: 1st Wed., 7:00 pm, Contract Design Center, Main Lobby, 600 Townsend St., San Francisco. \$3 at door. Call: John Dowdell, (415)665-3916. [Exp. #116.]

**North Bay Multimedia Association (NBMA).** Meetings: 3rd Thurs., 7:00 pm, Semantic, Novato. Call: Lee Callister, (415)883-0449. [Exp. #117.]

**SEF Multimedia SIG.** Meetings: 1st Mon., 7:00 pm, Center for Software Development, 111 W. Saint John St., San Jose. Call: Ralph Gilman, SIG chair (408)746-0551. [Exp. #118.]

## NANOTECHNOLOGY

**Nanosystems Study Group.** Meetings: Alternate Mondays, 7:30 pm, University Lutheran Church, 1611 Stanford Ave., Palo Alto. The study group will go through Eric Drexler's book, *Nanosystems: Molecular Machinery, Manufacturing, and Computation*. Announcements and mailing list, contact: Ted Kaehler, email: Kaehler2@AppleLink.Apple.com. Phone: (408)974-6241. [Exp. #115.]

**The Assembler Multitude.** Meetings: every other Mon., 7:30 pm, University Lutheran Church, 1611 Stanford Ave., Palo Alto. An open discussion of new technical developments in Nanotechnology and social consequences and dangers of Nanotechnology. Organized by Ted Kaehler. Email: Kaehler2@AppleLink.Apple.com. Address: 20525 Mariani Ave., MS 301-3D, Cupertino, CA 95015. [Exp. #115.]

## NETWORKING

**NetSIG.** Meetings: 4th Tues., 7:00 pm, Novell Sunnyvale. Networking SIG for Software Developers. SEF group. Call: Skip Addison, (408)283-3545. [Exp. #117.]

## NOVELL

**Silicon Valley Novell User Group.** Meetings: 3rd Wed., 6:30 pm, Sundowner Inn, corner of Ross and Mathilda, Sunnyvale. Call: Bill Strouse, (408)739-9081. BBS: (408)739-8753. [Exp. #114.]

## OS/2

**Monterey Bay And NPGS OS/2 User Group SIG.** Meetings: 2nd Thurs., 7:00 pm, Spanagel Hall, Naval Postgraduate School, Monterey. Demos and product evalua-

tions, question and answer sessions, assistance w/setup. Call: Michael Schievelbein, (408)656-2520 (days). [Exp. #115.]

**OS/2 Bay Area User Group.** Meetings: 4th Mon., 7:00 pm. For anyone interested in OS/2. Presentations, demos, q&a. Call: (415)755-3124. [Exp. #116.]

**OS/2 SIG Of San Francisco.** Meetings: 2nd Wed., 7:00 pm, location varies. Call: Margery Blum, (415)931-3110. [Exp. #112.]

## PARADOX

**Bay Area Paradox User Group (bapals).** Meetings: 4th Tues. (except June and July, 4th Wed.), 4:30 pm, SF City College, 800 Mission St. Call: (415)995-4688. [Exp. #115.]

**SVCS Paradox SIG.** Meetings: 3rd Tues., 7:00 pm, Tandem Computers, Bldg. 251, 10100 N. Tantau, Cupertino. Membership: \$12/yr. Call: Scott Jackson, (408)738-0424. [Exp. #114.]

## PEN COMPUTING

**Pen Software SIG.** Meetings: 4th Wed., 7:00 pm, Cubberley Community Center, Rm. H-1, 400 Middlefield Rd., Palo Alto. SIG of Software Entrepreneurs' Forum. Call: Bill McAlpine, (415)348-2257. [Exp. #117.]

## PROGRAMMING LANGUAGES

**North Bay Forth Interest Group.** Meetings: 2nd Sat., 1:00 pm, 2055 Center St., Berkeley. Tutorial at noon. Call: Leonard Morgenstern, (510)376-5241. [Exp. #113.]

**Sacramento Forth Interest Group.** Meetings: 4th Wed., 7:00 pm, SMUD, 1708 59th St., Rm. A, Sacramento. Call: Bob Nash, (916)487-2044. [Exp. #113.]

**San Francisco North Bay Smalltalk/V User Group.** Meetings: Every other month in downtown SF. Call: David Freihofner, (415)362-4283. Email: dfrei@well.sf.ca.us. [Exp. #112.]

**SEF/SVCS Visual Basic SIG.** Meetings: 2nd Thurs., 7:00 pm, Cubberley Comm. Ctr., Rm. H-1, 4000 Middlefield, Palo Alto. Call: Allan Colby, (415)851-4657. [Exp. #117.]

**Silicon Valley FIG.** Meetings: 1st Mon. after 1st Sat., 7:00 pm, Membership in the Silicon Valley Chapter of the Forth Interest Group is separate from International FIG. Call: Henry Vinters, (510)790-3945. [Exp.

#115.]

**Silicon Valley Forth Interest Group.** Meetings: 4th Sat., 10:00 am, Applied Biosystems, Inc., Conference Room A/B, 230 Lincoln Centre Dr., Foster City. Call: Art Hampton, (415)873-8554. [Exp. #117.]

**Visual BASIC SIG.** Meetings: 2nd Thurs., 7:00 pm, Cubberley Community Center, 4000 Middlefield Rd., Rm. H-1, Palo Alto. Sponsored by Software Entrepreneurs' Forum. Call: Allan Colby, (415)851-4567. [Exp. #117.]

**Visual C++ Bay Area Developer's Group.** Meetings: 3rd Wed., 6:00 pm, Berkeley. For agenda, location, and RSVP, Call: (510)254-9700, ext. 490. [Exp. #117.]

## SYBASE

**Sybase User Group.** For information, write: Sybase User Group, attn: Mar-Com, User Group Membership, 6475 Christie Ave., Emeryville, CA 94608. [Exp. #113.]

## TEXAS INSTRUMENTS

**TI-99/4A.** Meetings: 2nd Sat., Oakland. Call: Fred, (510)530-8335. [Exp. #115.]

## UNIX/XENIX

**BACUG—Bay Area Coherent User Group.** Meetings: 3rd Sun., 2:00 pm, San Mateo. Call: Viki Tamaradze, (510)549-1876; email: johnp@dumbcat.sf.ca.us. [Exp. #113.]

**N. California UNIX SIG.** Meetings: New group, just forming. UNIX, XENIX, LINUX, Coherent. Call: Randy Just, (707)769-1648. [Exp. #112.]

**UNIX SIG.** Meetings: 2nd Tues., DEC Aud., 130 Lytton Ave., Palo Alto. Sponsored by Software Entrepreneurs' Forum. Call: (415)546-4950. [Exp. #117.]

**UNIX/Xenix SVUG.** Meetings: 3rd Wed. 7:00 pm, Call: (408)745-7600. Fax: On-Demand info: (408)745-0740. [Exp. #116.]

## VIDEO TOASTER

**Video Toaster User Group.** Meetings: Last Thurs., 7:30 pm, HT Electronics, 275 N. Mathilda Ave., Sunnyvale. Special guests, equipment demos, hands-on workshops, plus info/tips on new System 3.0. Call: Andrew Timmins, (408)243-9233 (eve). [Exp. #115.]

## BBSes continued...

**Gift Shop.** (510)689-4686. 8 lines, 6GB, northern CA's hottest and largest BBS. VISA & MC accepted. Sysop: Waik Gan. [Exp. #113.]

**GMV-BBS.** (510)294-9052. 24 hrs., 300/1200/2400/9600. Multiline subscription BBS. Teleconference, private chat, email, SIGs, games, and file library for Amiga, IBM, Apple 8-bit, and Mac. Livermore. [Exp. #114.]

**Gold Diggers BBS.** (510)568-7807, 23, 23. 24 hrs., 2400/9600/14,400/19,200. IBM, Atari ST, Amiga, Mac, files and messages. Registration \$10 per year. [Exp. #115.]

**The Hobby Shop BBS.** (510)357-4125. 8-N-1, 2400/38,400. Over 5600 files and growing. FidoNet, many conferences. [Exp. #115.]

**L & B Sharing BBS.** (510)530-3499. 8-N-1, 300/1200/2400/9600/14,400. Nutrition, Recovery, New Age, files, doors, FidoNet, DharmaNet, SkyNet. Free. Sysop: Brian Gorecki. [Exp. #112.]

**Legal Information Systems BBS.** (510)644-1899. 24 hrs., 1200/2400. Cal. Appeals & 9th Circuit Court recent decisions. Fee for full access. [Exp. #113.]

**LZ/Nightline—A Vet-Friendly BBS.** (510)273-7830 (14.4K), 273-7831 (2400). Welcome all vets. Vet/VA info, DOS/Win files, nationwide email and Vetlink #22. Free. Sysop: Jon Mankowski. [Exp. #115.]

**Mayanus BBS.** (510)798-6543. 24 hrs., 2400. Specializing in graphx and util. IBM and Mac uploads welcome. Free. Sysop: Benign Fiend. [Exp. #114.]

**Milk & Blood.** (510)653-2232. 8-N-1, 2400. Drunken Milkman, driving drunk, discuss anarchy & personal hygiene. Free. [Exp. #113.]

**The New-Ark BBS.** (510)796-0947. 24 hrs., 2400/9600. Tradewars, running on two CD-ROMs. Reg required. Sysop: Hiram Wolf. [Exp. #113.]

**Olde Stuff BBS.** (510)530-3051. 8-N-1, 24 hrs., 9600. Antiques and collectibles. Buy, sell, learn. Sysop: Bill Clark. [Exp. #115.]

**Omikron BBS.** (510)657-8820. 24 hrs., 14,400. Mac files and discussions. Fremont. Free. Sysop: [Exp. #113.]

**The Party Warehouse BBS.** (510)256-9809. 8-N-1, 24 hrs., 14,400. Multiline, multine, tons of files, msgs, chat, dating, monthly user parties. Adult & alt lifestyles

welcome. Sysop: Party. [Exp. #114.]

**The Phantom Zone BBS.** (510)538-9586. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Online games, offline mail reader. Free. Friendly sysop. [Exp. #115.]

**The Pit Of Despair.** (510)939-8934. Not for the weak hearted! Free. Sysop: Scarecrow & Dargoth. [Exp. #112.]

**The Revolution.** (510)451-1206. 1200/2400/9600/14,400/19,600. Specializing in Mac files, yet all types welcome. Free. Sysop: Mike McGee. [Exp. #114.]

**So Be It!** (510)680-1980. 24 hrs., 300/1200/2400/9600/14,400. Specializing in male GIFs and topics for women. Online games, message areas. [Exp. #112.]

**The Squeeze BBS.** (510)829-2252. 8-N-1, 24 hrs., 2400. Bay Area entertainment, genealogy, IBM, Windows, adult, and games. Free. [Exp. #114.]

**StarPort Valhalla.** (510)522-3583. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. Modified WWIV. 100+ echos on five networks. Online games. Sysop: Tracy Baker. [Exp. #114.]

**Tailored Chains BBS.** (510)614-2960. 5 lines, gay oriented, multiline chat, gay GIFs. Free. [Exp. #114.]

**Tiger Team Buddhist Info Network.** (510)268-0102. 24 hrs., 14,400. Email, DharmaNet, Internet, conferences, local and national event listings, three phone lines. Sysops: Gary Ray & Jeff Macko. [Exp. #115.]

**Triple T BBS.** (510)458-6404. 24 hrs., 2400/9600/14,400. Open to all, newest files, scrabble for pay for top access. Sysop: Peter Tiffany. [Exp. #114.]

**VA Listings.** (510)637-1261. 24 hrs., 300/1200/2400/9600. VA-owned homes for sale. Sysop: David Piersall. [Exp. #113.]

**Viper 1 Premium BBS.** (510)535-02315. 1200/2400/9600/14,400. Multiline, 900MB of storage, 5.2GB online, large adult file areas, games, image scanning service available. Sysop: Andre Porter. [Exp. #114.]

**The Warped BBS.** (510)939-8344. 300/1200/2400/9600/14,400. 260+MB, five nets, WWIV 4.22 node. Sysop: Max Baker. [Exp. #112.]

**Wasteland.** (510)676-3593, 676-7640. 24 hrs., 14,400. No fees. Sysop: Wizard 1 & Tanker. [Exp. #113.]

**The Weasel Den II.** (510)432-0204. Featuring WeasNet—online games and msgs only. [Exp. #114.]

**Windows Online.** (510)736-8343. Windows BBS and publisher of WOL Review. Over 10,000 Win 3.x & 20,000 DOS files, 7GB, 17 lines. Free trial. [Exp. #114.]

**Wishing Well BBS.** (510)745-7901. 24 hrs., 1200/2400/9600/14,400. 85+ online games, quality files, ANSI Art, conferences, matchmaker, and more! Sysop: MaryLou White. [Exp. #115.]

**Worldview BBS.** (510)676-2919. 8-N-1, 24 hrs. 1200-14,400. 2 lines, open to all, docs/discussion of int'l xian democracy issues. Sysop: Bill Gram-Reefer. [Exp. #112.]

## 707

**Cutting Edge BBS.** (707)747-5605. 24 hrs., 300/1200/2400/9600/14,400. Great adult section, 90+ doors, net mail, files. Free. Sysop: Bryan Edginton. [Exp. #114.]

**Dobbs Enterprises.** (707)427-0277. 300/1200/2400/9600. Over 70,000 files online, four lines, U/NINet, SourceNet, doors. [Exp. #115.]

**Mnemonic BBS.** (707)451-8353, 451-4678. 14,400. 15,000 plus files, NetMail, doors. Free. [Exp. #115.]

**The Powder Keg BBS.** (707)427-1310. 14,400. Protect your right to keep and bear arms! Free. Sysop: Peter Nesbitt. [Exp. #112.]

**Recommended BBS.** (707)448-2225. 24 hrs., 300/1200/2400. Multiuser games, teleconference, conversational and technical areas, 16 lines. All welcome. Sysop: Jay C. Parangalan. [Exp. #113.]

**Threat Management Institute BBS.** (707)935-1713. 8-N-1, 24 hrs., Conferences dealing with issues of personal defense, firearms, law, etc. Schedule of TMI Classes. No Fees. Sysop: Peter Alan Kasler. [Exp. #113.]

**The WInd Tunnel.** (707)421-0380. 24 hrs., 1200/2400/9600/14,400. Your source for Windows programs, utilities, games, WAVs, and TT Fonts. Sysop: John Wright. [Exp. #115.]

## 916

**24th Street Exchange.** (916)448-2483. 8-N-1, 24 hrs., 300/1200/2400/9600/14,400. 24 lines, seven CD-ROMs, FidoNet, USA Today. [Exp. #113.]



continued from page 154

have to eat. Would you be interested in contributing to the project?" It's "Oh, we know you're making a fortune off of this! Fix it!" This causes the candle to burn faster as it nears the end. Once the original burners burn out, either others take over, or the facility is simple or sturdy enough to last, or it fades away.

Many volunteer efforts do not necessarily produce source code of the highest quality, due to lack of time, inexperience, or whatever reason. Once the original support is gone, those who have come to depend on the facility may be left out on a limb.

On the other hand, many of the mainstays of the computer industry were originally produced by volunteers, and only later turned into products. Examples include the original Apple, Lotus 1-2-3, etc. Sometimes all it takes to turn a volunteer project into a supportable venture is financial support. Some volunteers even turn out to be good managers. Others are perceptive enough to hire somebody else to do that.

## SUPPORT IT NOW, OR FIX IT LATER

With the Matrix of interconnected computer networks growing exponentially and encountering new classes of users and technical problems, not every problem can wait for lengthy study. Yet if many innovations are left to uncoordinated and unfunded volunteers, the current mess will just get bigger.

Those who depend on the networks—whether users in government, academia, and industry; vendors of computer and network hardware, software, and services; or other interested parties—will have to deal with it sooner or later. Those and others with funds might do well to look towards more small innovators for network developments.

Meanwhile, to a large extent, networks are volunteers, and will remain so for some time to come. ■

*John S. Quarterman is secretary of MIDS and editor of Matrix News. Quarterman is senior technical partner of Texas Internet Consulting (TIC), which consults in networks and open systems, with particular emphasis on TCP/IP networks, UNIX systems, and standards. He is the author of The Matrix: Computer Networks and Conferencing Systems Worldwide, Digital Press, 1990; and coauthor of The Design and Implementation of the 4.3BSD UNIX Operating System, 1989; and UNIX, POSIX, and Open Systems: The Open Standards Puzzle, Addison-Wesley, 1993.*

*Smoot Carl-Mitchell is the managing partner in TIC, and is president of MIDS. He was the principal author of Practical Internetworking With TCP/IP and UNIX, 1993 and is coauthor of The Internet Connection: System Connectivity and Configuration, forthcoming in 1993; both coauthored with Quarterman, from Addison-Wesley.*

*They can be reached at: MIDS, 1106 Clayton Lane, Suite 500W, Austin, TX 78723. Email: mids@tic.com.*

## USER GROUPS continued...

### VIRTUAL REALITY

**Silicon Valley Virtual Reality.** Meetings: 2nd Thur., 7:00 pm, 922 Wedell Ct., Sunnyvale. Open forums, info sharing, and technology developments. Call: Algis normantas, (408)745-7600. [Exp. #116.]

**Virtual Reality Group.** Meetings: varies. VRG is a nonprofit organization dedicated to sup-

porting and promoting the development of VR technologies in the Bay Area. Everyone welcome. Call: Linda Jacobson, (415)826-4716. Email contacts: Linda Jacobson (lindaj@well.sf.ca.us), Peter Rothman (avatarep@well.sf.ca.us), or Timothy Childs (tchilds@well.sf.ca.us). [Exp. #114.]

### WINDOWS

**BMUG Windows Program-**

**mers SIG.** Meetings: 1st Tues., 6:30 pm, 2055 Center St., Berkeley. The Programmers SIG is a forum for Windows programmers of all levels to meet and exchange information. Call: Ferdinand Rios, (510)526-3031. [Exp. #115.]

**Windows SIG North.** Meetings: 2nd Wed., 7:00 pm, Univ. of Calif. Richmond Field Station, 1301 S. 46th St., Bldg. 454, Richmond.

**Software Entrepreneurs' Forum.** \$10 for nonmembers. Call: Barbara Cass, (415)854-7219. [Exp. #118.]

**Windows SIG South.** Meetings: 1st Wed., 6:30 pm, Cubberley Community Center, Room H-1, 4000 Middlefield Rd., Palo Alto. Software Entrepreneurs' Forum. \$10 for nonmembers. Call: Barbara Cass, (415)854-7219. [Exp. #118.]

## ASSOCIATIONS

**American Association For Artificial Intelligence (AAAI).** Write: 445 Burgess Dr., Menlo Park, CA 94025. Call: (415)328-3132. Email: membership@aaai.org. [Exp. #116.]

**The Association For Customer Support Professionals.** Dedicated to the development and furtherance of customer support as a distinct profession, to the growth of the support community, and to the improvement of support service. Call: (510)865-4515. Internet: tao@well.sf.ca.us. [Exp. #114.]

**Association Of Information Systems Professionals (AISP).** Write: 922 Weddell Ct., Sunnyvale, CA 94090. Forums, support, network for IS Professionals. Many SIGs. Call: Al Normantas, (408)745-7600. Fax: (408)745-0740. [Exp. #116.]

**Computer Professionals For Social Responsibility.** Meetings: Last Sun., 2:00 pm, BMUG Offices, 2066 Center St., Berkeley. Call: Judy Stern, (510)643-7499. [Exp. #117.]

**Computer Software Industry Association.** CSIA monitors all state legislation which affects the computer software industry and some federal issues. Call: (415)948-9192. [Exp. #115.]

**East Bay Entrepreneurs' Network.** Meetings: 1st and 3rd Wed., Berkeley Marina Marriott. The organization of East Bay business and professional leaders who exchange business leads for mutual benefit. Call: Sherry Markwart, (510)843-1557. [Exp. #112.]

**IEEE Computer Society, San Francisco Chapter.** Meetings: alternating Weds., 7:30 pm, SF State. Call: (415)905-4400. [Exp. #118.]

**Independent Computer Consultants Association, Northern California Chapter.** Meetings are open to all. Only national trade assoc. comprising non-aligned working computer professionals with in-the-trenches experience. Call: ICCA, (415)441-2948. [Exp. #117.]

**Independent Computer Consultants Association, Silicon Valley Chapter.**

Meetings: 4th Thurs., 6:00 pm. Hobee's Restaurant, 920 Town & Country Village, San Jose. Provides a network for independent computer professionals in South San Francisco Bay and Monterey Bay areas. Call: Chapter Hotline, (408)492-8888. [Exp. #116.]

**North Bay Systems Professionals.** Meetings: 3rd Wed., 6:00 pm, Embassy Suites Hotel, 101 McInnis Pkwy., San Rafael. NBSP provides a forum and network for systems professionals. Call: Pat Sullivan, (510)769-2648. [Exp. #117.]

**San Francisco Robotics Society Of America.** Meetings: 1st Wed., 8:00 pm, Exploratorium, San Francisco. Free. Call: Brad Smallridge, (415)550-0588. [Exp. #116.]

**Society For Technical Communication, Berkeley Chapter.** Meetings: 2nd Wed., dinner at 6:30, program at 7:30, Upstairs, Yenching Mandarin Chinese Restaurant, 2017 Shattuck Ave., Berkeley. Call: Rick Julius, (510)975-0876. [Exp. #118.]

**Society For Technical Communication, San Francisco Chapter.** Meetings: 3rd Wed., 6:00, program at 7:00 pm, Stagecoach Restaurant, 44 Montgomery St., San Francisco. For technical writers, editors, and other technical communicators. Some meetings are dinner meetings, for which reservations are necessary. Call: (415)985-7121. [Exp. #116.]

**Software Entrepreneurs' Forum.** 3rd Wed., 6:30 pm, Elk's Lodge, 4249 El Camono, Palo Alto. Industry association dedicated to software developers and entrepreneurs, offering information and education on all facets of the software industry. Call: Information, (415)854-7219; reservations, (415)965-9003. [Exp. #117.]

**United Sysops Association.** Meetings: 2nd Wed., 7:00 pm, Coco's, 1035 S. Mary Ave., Sunnyvale. Organization of bulletin board sysops and users. Call: Bill Strouse, (408)739-9081. BBS: (408)739-8753. [Exp. #114.]

## IS YOUR LISTING MISSING?

**Free user group and association listings** are limited to the group's name, meeting information, contact name and phone number, and a ten-word description. They will be **deleted at six-month intervals** to ensure timeliness and accuracy of information.

**Free BBS listings** are limited to the board's name, phone number, hours, baud rates, parameters, and a ten-word description. Please let our readers know if your BBS is free or requires a fee. Because we have an ongoing problem of boards shutting down without telling us, much to the annoyance of would-be callers and the new phone number's owner alike, we will **delete these listings after they've run three months**. The notice at the end of the listing—Exp. #xxx—refers to the last issue number it will appear in unless renewed.

**You can update or renew your listings at any time. If yours is missing, send your listing information to:**

**US Mail** should go to: MicroTimes User Group, 3470 Buskirk Ave., Pleasant Hill, CA 94523. **Faxes** are welcome at (510)934-2417. **Email** can be sent to: microx@well.sf.ca.us. Or MCI:MICROTIMES.



# Classifieds

## Accessories

### Diskettes

| Description | Non-Formatted | Formatted |
|-------------|---------------|-----------|
| 3.5" DS/HD  | .48ea.        | .49ea.    |
| 3.5" DS/DD  | .35ea.        | .36ea.    |
| 5.25" DS/HD | .30ea.        | .31ea.    |
| 5.25" DS/DD | .20ea.        | N/A       |

**Call 1-800-975-3100**

**Function One**

**MAXELL SONY VERBATIM 3M DISKETTES & COMPUTER SUPPLIES**

**GENERIC FORMATTED**

|                 |                  |
|-----------------|------------------|
| 3.5" DS/HD .52¢ | 5.25" DS/HD .31¢ |
| 3.5" DS/DD .36¢ | 5.25" DS/DD .21¢ |

**1-800-214-4444**

**Display Your PC's Screen on up to 20 Monitors**

**Model 400 Video Splitter**

**Starting at \$250**

**H & R TECHNOLOGY**

SANTA ANA, CA (800) 959-6439

## Accessories

Quality IDEMITSU Rewritable

### OPTICAL DISKS

ISO Standard Proven Performance

|               |                |
|---------------|----------------|
| 3.5" (128 MB) | 5.25" (800 MB) |
|---------------|----------------|

**\$37 \$97**

**1-800-247-0013**

FAX (719) 475-1845

MPS Mail Order Inc.

### POWERSVISION

New revolutionary on-line buying & information service. Ground floor opportunity MLM. Income for Life. A no risk money making opportunity. Call for details. (415) 388-8893

Announcing: 100% cotton canvas dust covers now available factory direct! For all computers and printers. Highest quality - custom fit - heat ventilating - non static - will not get stiff or crack with age. Satisfaction guaranteed! Call for free brochure. (800) 826-5761. Contemporary Computerwear.

## Bulletin Boards

**PACIFIC EXCHANGE BBS 408-946-8561.** Full Featured BBS with 12 Incoming Data Lines, 50,000 IBM/Window files, 10,000 Adult files, USA-Today online news, Games, Grafittie, Classifieds and more.

## Bulletin Boards

**FIRST ONLINE.** Over 30,000 files. 5.2 Gig! PC-SIG Library. Huge adult conference. All lines USR 1200-16,800 baud. REDWOOD CITY: (415)598-0398 SAN FRANCISCO: (415)992-3780 ORINDA: (510)254-5455 SUNOL: (510)862-2200 SAN JOSE: (408)247-1717.

**FREE WINDOWS SOFTWARE,** Windows Online (510)736-8343 bbs. Get those hard to find public domain and shareware Windows 3.x files. Call from your home or office, by modem. Assist your company with their Networking of Windows. ATTENTION: Windows Developers, upload your new DEMOS and Shareware for distribution. We provide 50 New Windows & DOS files everyday & currently 10,000+Win3 files-Over 650 message and support Conferences. Read our new magazine called "WinOnline REVIEW" with its full color graphics and hypertext, all in a Windows HELP file. Includes Windows Tips, shareware and commercial software reviews, New Win3 Product News and much more. All 13 lines are US Robotics Dual Standard modems to 16,800 BPS, 7.0 gigs of storage and Visa/MC accepted on-line for memberships. Call (510) 736-8343 today. Sysop&Publisher, Frank Mahaney.

## Business Opportunities

**Earn \$75/hour with your own computer cleaning business.** Call for free information. (408) 778-2944.

## Bulletin Boards

**We have the Bay Area covered!**

- 30,000 files, 5.2 Gigabytes
- PC-SIG Library on CD ROM
- Huge Adult Conference
- Local Numbers for many bay cities.

415-598-0398 San Carlos  
415-992-3780 San Francisco  
510-254-5455 Orinda  
510-862-2200 Sunol  
408-247-1717 San Jose

**first ONLINE**

## Career Connections

**Free access from anywhere at anytime. View and Respond to the exciting Career Opportunities on-line**

**Call (415) 917-2129 (2400 Baud)**

**Call (415) 917-2125 (14,400 Baud)**

**Modem settings: 8,1, N**

**Modem emulation: ANSI or VT100**

**Voice: (415) 941-6101**

## Buy-Sell-Trade

## Buy-Sell-Trade

## The Clone ZONE

**We buy...**

- Surplus Systems • CPU's
- Memory • Harddrives

Fax us your list

**Networks**

Training  
Complete Systems  
Upgrades  
Repair  
On-site Service

**486 Local Bus**

**386 Systems**

SVGA Refurbished from \$189

Complete Systems from \$229

**Financing Available**

1555 Third Ave, Walnut Creek

**510-935-5203**  
Fax 510-938-0728

## HOW TO PLACE YOUR CLASSIFIED AD IN MICROTIMES:

**MINI DISPLAYS:** 1 column inch=1 5/16"x7/8" wide. \$49 per col/inch, camera ready art, or \$49 + \$20 for 1X typesetting/production fee.

**BUSINESS ADS:** Rates are \$15 for 15 words or less. 50¢ for each additional word. Your phone number counts as one word.

**CATEGORIES:** See index to choose the classification that best describes your product or service.

**FREE ADS:** Private individuals may have one free classified

ad of 15 words or less under Hardware, Software, or Accessories only. Mail coupon by the noon deadline for that issue, no phone orders for free ads.

No refunds will be given after copy is received. Credit may be given under certain circumstances. Mail, deliver or fax this coupon along with payment by noon deadline for that issue.

## TO RESERVE SPACE

Phone Orders  
**(510) 934-3700**  
Fax Orders **(510) 934-7351**  
with Visa or MasterCard only.

### CLASSIFIEDS CATEGORIES

- ☐ **HARDWARE**
  - ☐ For Sale
  - ☐ Wanted
- ☐ **SOFTWARE**
  - ☐ For Sale
  - ☐ Wanted
- ☐ **ACCESSORIES**
- ☐ **BULLETIN BOARDS**
- ☐ **SERVICES**
- ☐ **BAR CODES**
- ☐ **CARTRIDGE REFILL**
- ☐ **DESKTOP PUBLISHING**
- ☐ **DISK CONVERSION**
- ☐ **REPAIRS**
- ☐ **VOICE MAIL**
- ☐ **MISCELLANEOUS**
  - ☐ Computer Rentals
  - ☐ Office Rentals

### CAREER MARKETPLACE CATEGORIES

- ☐ Employment Information
- ☐ Jobs Offered

### CONSULTANTS NETWORK CATEGORIES

- ☐ Accounting
- ☐ Business Opportunities
- ☐ Engineering
- ☐ Finance
- ☐ General
- ☐ Hardware
- ☐ LAN
- ☐ Programmers
- ☐ Software
- ☐ Technical Writing
- ☐ Training

Cost of ad \_\_\_\_\_ X number of issues to run \_\_\_\_\_ = Amt. enclosed \_\_\_\_\_

☐ Classified ☐ Career Marketplace ☐ Consultants Network

☐ Check/MO ☐ Visa ☐ MasterCard ☐ Credit Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Name \_\_\_\_\_ Amt. \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (\_\_\_\_) \_\_\_\_\_

SEND TO: MicroTimes Classifieds, 3470 Buskirk Ave., Pleasant Hill, CA 94523

**DEADLINE FOR INSERTION IN THE OCTOBER 18, 1993 ISSUE IS NOON ON FRIDAY, OCTOBER 1, 1993**



# Classifieds

## Buy-Sell-Trade



We buy used computers, parts, and printers. Call and leave a message at 415-586-5377.

## Cartridge Refill

**Laser Ace. Toner Cartridge recharge** for Laser Printers and Canon PC Copiers, \$34-\$39. (408) 263-4608.

**YOUR #1 SOURCE OF NEW & QUALITY REMANUFACTURED CARTRIDGES.** SPECIALIZING IN LASER PRINTER & COPIER CARTRIDGES FOR HP, CANON, APPLE, IBM, EPSON & MANY MORE. 100% GUARANTEED. FREE PICK-UP & DELIVERY. WE SERVICE LASER PRINTERS & COPIERS. TOP DOLLAR PAID FOR YOUR EMPTY CARTRIDGES. UNITED LASER CARTRIDGE SERVICE. 800-633-8527, 510-689-1101.

## CD - ROM

## Cartridge Refill

### ORRIS TONER CARTRIDGE REMANUFACTURING COMPANY

We completely disassemble, clean and replace worn or defective parts, replace toner with high quality OEM toner and assign your cartridge with a tracking number.

Ink Jet Cartridges Refilled \$6.00-\$12.00  
Ribbons Re-Inked 1.00-\$7.90  
1-(800)-484-9896-1055 • Local (408) 779-6940 100% GUARANTEE

### LASER WORKS

1 (800) 484-9817 code "LASR"  
Satisfaction guaranteed!  
Toner cartridges  
Printer Service  
(510) 232-8946 109 Minna St., Suite 406 San Francisco 94105

**LASER PRINTERS & COPIER Remanufactured cartridges 100% Guar.** LASER PRINTER/COPIER SERVICE SPECIAL \$59.00+PARTS! We deal with HP, NEC, IBM, CANNON, APPLE, SHARP & 250 OTHER MODELS. WE SPECIALIZE IN HP/ISI/4si, HP-4, IBM4019, CARTRIDGES! SELL REFURBISHED Drum Units for panasonic, okidata, ricoh, Epson, etc. We buy empty toner cartridges & used laser printers! We repair B/machines. CALL LCI: (800) 404-2101 or (510) 893-7001 or SJ area (408) 356-6085.

## CD - ROM

## Cartridge Refill

Help the environment and save money! 100% guaranteed Toner Cartridges for HP, Canon, NEC, Panasonic, Apple, Brother, IBM, Wong, etc. and printers services. LASER CONCEPTS 1-800-675-9501 or 510-674-1501.

## CD - ROM

**Adults CD ROM.** All ROM disks are menu driven and BBS ready. Titles available PC-pix volumes 1 and 2, 600+ mega bytes, \$159. Erotic Encounters, worlds largest adult CD ROM \$139. Storm volumes 1, 2 or 3 \$159/each. Ecstasy Hot Picks \$179. Cal Ad Software, P.O. Box 50204, Long Beach, CA 90815.

## Computer Insurance



**SAFWARE**  
INSURES YOUR COMPUTERS!  
Full replacement of hardware, media, purchased software. From \$49 yearly. Covers fire, theft, power surges, other accidents. Blanket coverage; no list of equipment needed. Low \$50 deductible. Call for information or immediate coverage.

1-800-848-3469  
Local (614) 262-0559  
SAFWARE: The Insurance Agency Inc.  
2929 N. High Street, P.O. Box 02211  
Columbus, OH 43202

## Computer Rentals

**MacAcademy instructional videos** - Pagemaker, Photoshop, Macromind, Free Hand, Excel, Filemaker, Superpaint and more. Sales and rentals (415) 255-9760.

**For rent or lease:** IBM / PC Clone computers. (510) 644-9368.

## CD - ROM

**CD-ROM TITLES.** Direct mail prices! 24hrs. (800) 685-7763  
EZS, 6492 South St., #252, Lakewood, CA 90713.

## CD - ROM

### STARDUST SOFTWARE

CD-ROM DRIVES • ALL MAJOR BRANDS  
Sony • NEC • Telex • Toshiba • Mitsumi  
Largest Selection of CD-Rom Titles  
Soundboards  
Speakers  
Multi-Media  
Call Now for our Low Prices & Save  
Burbank, CA 818-559-2270

## Desktop Publishing

**Eas-y Desktop Publishing & Wordprocessing.** Ads, flyers, resumes, letterheads, business cards, menus, newsletters, and more! Reasonable rates! Call 415-586-5377.

## CD - ROM

### CD-ROM DRIVES

Toshiba, Telex, TEAC  
SCSI Interface cards  
Trantor and Media Vision  
Large selection of compact disc software  
Caddies • Accessories  
**COMPUTERS AT LARGE**  
Saratoga, CA  
Dedicated to CD ROM Technology  
Please Call for Our Price List  
800-642-4194 408-255-1081  
408-255-2388 Fax

## MICROTIMES

### CLASSIFIEDS

**510 934 3700**

**FREE CD-ROM DISC!**  
Mega Demo & Test contains 350 Megs of PC Shareware & PD software. Including Special CD-ROM Benchmark and Test Utilities written by our programming staff, & NOT available on any other CD-ROM Discs. Our Special Test Utilities measure throughput as well as access time in a reliable and consistent manner for a meaningful real-world benchmark for CD drives. The Disc and Interface Software are fully functional (Even for BBS Use) and not crippled in any way. When purchased separately Mega Demo and Test is \$14.00 plus \$6.00 for S&H. However for a Limited Time This Demo and Test CD-ROM Disc is Free with any CD Disc purchase.

These are the Only Shareware & PD CD-ROM Discs with both a DOS, and a Windows 3.1 "Hypertext" Retrieval Interface. Plus All CD Discs are BBS Ready, and include files.bbs plus our BBS Door with "Remote User" Mouseable Pull-Down Menu Interface.

PROFIT PRESS, 824 E. Fl. Lowell Rd., Tucson, AZ 85719 • Info (602) 770-0000 FAX (602) 770-0005 • BBS (602) 770-0008

The prices listed above do not include shipping and handling. Special shipping and shipping to foreign countries is available.



**Genuine SONY**  
Caddies \$3.50 each with ANY \$49.00 CD-ROM Disc Purchase Limit of 10 Per Customer

**ORDERS ONLY! CALL TOLL FREE 1-800-843-7990**

**New! JUST RELEASED! New!**  
S.R.P. \$79.00 ea. S.R.P. \$79.00 ea.

**Mega CD-ROM<sup>3</sup>**  
PC Shareware Spectacular

660 Megs 1 Plus Gigs Uncompressed! Our Newest in The Mega CD-ROM Series. Contains Utilities of All Types, Word Processors, Data Base, Communications, Graphics Tools, CAD, Business, Education, Programming, Hobby, Games, Sports, Sound Files, 256 Color GIF's, FLI's, Bibles, Fonts, Windows Programs, BBS, Plus Much More!

**Mega Windows<sup>2</sup>**  
Windows Shareware / Public Domain

Our Newest in the Mega Windows Series. This Disc Contains Windows Utilities of All Types, Windows Application Programs of All Types, Windows Communications Programs, Windows Games, Windows Fonts, Windows 256 Color Graphics, BMP, Windows Sound Files, WAV, Windows Drivers and Icons, plus OS/2 Shareware, and Much Much More!

**Mega Games<sup>1</sup>**  
PC Games, Graphics & Sounds

Contains PC Games from Shareware Companies such as Apogee, and Epic, plus many many others. Game Bytes Electronic Magazine, with file categories that include Arcade, Adventure, Puzzles, Mind & Strategy, War Games, Card Games, RPG Games, Plus 256 Color GIF's, FLI's of all types & Includes Sound Files, MOD, ROL, WAV & VOC

**Publisher Direct Price \$29.00 ea. Or All 3 New Mega Fantastic MEGA CD-ROM Discs for Only! \$59.00**

**Forbidden Subjects<sup>1</sup>**

This Disc Contains Hacking, Phreaking, Tone Box Information, Anarchy, Subculture, Magic, Internet & Computer Security Secrets, Bomb Plans, FBI & Police Net Files, Virus Code, Sick & Twisted Graphics, UFO, Occult, Even Ham Radio Files. Plus Much Much More! Everything Fun and Interesting That Absolutely No One Wants You to Know About! Includes MegaSearch for those Fascinating Late Night Text Searches, & (If You Dare) for BBS there's files.bbs Plus MegaDoor and MegaTerminal.

**Our Exclusive! Special Price \$39.00**  
S.R.P. \$79.00 ea.



**fao Gold<sup>TM</sup>**

Volumes 1, 2, & 3  
"Best of the Best"  
For Adults Only "GOLD"  
"Wife Proof Labels"  
Each Over 600 MegaBytes  
Many Not On FAO 123 - 256 Color SVGA GIF's with NO BBS Logos! Plus Animated FLI's, GL's, & DL's, Includes Games, and Fantasy Text Files. S.R.P. \$79.00 each.

**\$99.00 SET**

**fao<sup>TM</sup>**

Volumes 1, 2, & 3  
For Adults Only  
"Wife Proof Labels"  
256 Color SVGA GIF's, Plus Animated FLI's, GL's & DL's  
Includes Games, & Fantasy Text Files.  
3 Disc Set 1,892 Megs - 16,000+ Files!  
S.R.P. for this Set of 3 Discs \$199.00.

**\$69.00 SET**



# C l a s s i f i e d s

## Data Conversion



**COMPUTER DISK & TAPE CONVERSIONS**  
Micros • Minis • Mainframes  
Floppy 1/2 & Cartridge formats  
DATA CONVERSION SERVICES  
(800) 327-0330

## Employment Information

**International Software Jobs!**  
The International Computer Professional Association gives you the world-wide contacts to find a software job overseas. For more info call (415) 695-7618 Fax: (415) 543-3022

## Hardware

**HP95LX-1MB.** Mustsell, \$600/OBO, ConnPack \$90, 3-1/2 Ext FDD \$300, PC3000/flashcards, S/W Driver. JEFF (415) 583-3692.

**486SX 33MHZ Tower 240HD 8M RAM, 14" Viewsonic NT Color Monitor, Diamond Star SVGA card, 3.5, 5.25 floppy, extend program keyboard \$1500.** (415) 925-8978.

## Hardware

**Backup power supply \$165, new, 225w.** Protects against spikes, surges, blackouts, (20-30min.), and equipment damaging brownouts. (415) 456-7000.

**HARD DRIVE Wholesale Price**  
300MB and above  
Perfect for File Server  
Call (415) 858-2680  
Fax (415) 858-2840

## Hardware

**MacII, 8/40 w/dual page 20" monitor, modem, Hi-Res (415 dpi) PostScript printer, software \$1950 (OBO).** (408) 727-8338.

**TOP \$\$\$ PAID!!!**  
- SIMM Memory 1Mx3, 4Mx9 70ns  
- CPU 486 DX, DX2  
- Good or Defective  
Call Peter at (415) 564-4347  
7:00 - 11:00 pm. Seven days a week.

## Hardware

**WHOLESALE PRICES. CD ROM specials.** Multimedia Special Kit - soundblaster Pro, Panasonic CD-ROM, 5 CD titles and more s/w \$425. Harmony Pro 16 Mediavision- Mitsumi CD ROM, 5 CD titles + s/w \$445. Panasonic double speed internal CD-ROM, 7 titles, s/w, sndblstr \$545. CD-ROM w/ card \$199. soundcard w/spkr & microphone soundblaster compatible \$89. 5 CDROM titles for \$89. We do Repairs, trade for upgrading, Memory Upgrades, Optical Drives, & MathCO (408) 997-8380. For vendors (408) 997-6944.

**UNITEK Hard Disk Repair.** CONNER, SEAGATE, MAXTOR, PRIAM 40-59 \$2.50/MB, 60-79 \$2.25/MB, 80-99 \$2.00/MB, 100-149 \$1.75/MB, 150-199 \$1.50/MB, 200-299 \$1.25/MB, 300-399 \$1.05/MB, 400-599 \$.95/MB. Call Now! (408) 395-0382.

**CLEARANCE SALE. BLOWOUT PRICES!!!!!!** Powerbook D 210 4/80 like new \$1200. Watch TV Video Board w/ headphones \$100. HP Serial Paint Jet \$400. USR 96/96 Fax/Modem \$129. Timktu for Windows/Mac 95/95. IBM original PC - \$79; 1 MB memory card (expandable to 4MB) for HP Laserjet II & III printers - \$69. Suprmac 8-bit video cards \$69; 40MB ext. HD for Mac w/ carry case - \$179; Mactops 3.1 - \$79; IBM OS/2 - 5.25" - \$69; M/S DOS 5.0 upgrade - \$40; Kanai print sharing box, Procom 1.2 MB ext. FD for PS/2 \$100, HP tax font \$89, Compaq LTE battery pack \$69, IBM SDLC adapters \$49, Epson LQ1050 tractor \$39- Please make an offer for any or all equipment. Please call Gigabytes at (510) 440-8032 or fax us at (510) 440-9099. WE ALSO DO REPAIRS AND UPGRADES AT VERY COMPETITIVE PRICES - JUST GIVE US A CALL AND WE WILL GIVE YOU A QUOTE!

**Apple/MAC Products at Great Prices!** We carry used Macintosh and compatible equipment. Please call or fax for more info or pricing- GIGABYTES (510) 440-8032, Fax (510) 440-9099. We also do repairs!

**DONATE YOUR COMPUTERS to a genuine non-profit organization.** We'll put it to work training students in a school or rehabilitation center. Get Tax Benefits and a Good Feeling! (415) 964-4064 the Computer Recycling Center, Inc.

**BUY AT DISCOUNT!** PowerBook batteries & rapid-charger/conditioners-fully guaranteed; service, convenience & low prices., HUDSON BAY 1-800-447-0400.

**Cash for APPLE IIe/IIc/IIgs, ImageWriters, Mac's, dead or alive.** 1-800-800-0525. Computers for Schools.

## Hardware

**FLEXI ELECTRONICS. Tel. (408) 226-1536 fax (408) 226-2791.** Best rate on complete systems, fax machines and printers. 386DX-40 \$859. 486DX-33 \$1279. 486DX2-66 \$1489. Get your cash discount on bulk orders.  
**Geiger Counter, New, Hand Held, LCD readout \$25, call 408-988-4641.**

**HEWLETT PACKARD, Laserprinter postscript cartridge for Laserjet III, IIID, IIP, IID. \$210. new. (510) 782-0317.**

**NEW! Complete PC Highspeed Modem 14400 BPS S/R Fax. 7 year warranty w/software \$200.** (707) 554-2625.

**Virtual reality hardware and software.** DVI boards, spaceball, 3rd mouse, head tracker, high C compiler. (408) 720-8140.

**386SX-16 2MB RAM, 2 floppies, VGA card, 40MB HD \$250.** (408) 281-2640.

**SONY TR-7 CAMCORDER, stereo, LED battery, \$595; SHARP Wizard OZ9600, pen interface, mint, \$295.** (415) 456-5655.

**Hard drive. Brand new Maxtor 8760S 760MB SCSI hard drive, preinstalled in new, top quality storage dimensions external drive bay, plus storage dimensions SCSI host adapter. Perfect for starter networks or high performance workstations. Regularly priced at over \$1500, yours for only \$750.** Call Noam at (408) 298-5161 (lv. message) or (408) 297-5766 (fax).

**TAXAN UV/1000 20" Monitor 1280X1024 non-interference brand new, \$1600/OBO.** Call (510) 656-3201 David.

**IBM (real) XT with 640K, 101KB, Mono, 30Meg HD, modem, software. \$185/OBO.** Call Danny 415/982-5053.

**486DX-25 color notebook, 4MB RAM, 80MB HD. 2 weeks new. \$2100.** Microsoft ergonomic mouse \$50. (415) 752-1540.

**PC 386: 14" VGA, new keyboard, 2 FD(s), mouse and more!! only \$456.** (415) 391-6093 William.

**IBM PS/2M80 486SX/33, 12MB RAM, SCSI controller, 321MB SCSI. 3.5 & 5.25" floppy, 8MM tape backup. 8514 (16") color display. 8514/A with full memory KB & mouse. like new. \$2750.** (408) 256-7841.

**Amiga 500, 52MB Quantum HDD, 2.5MB RAM, 880K EXT. FDD, 1084(ST) RGB monitor, AMAXII Macintosh emulator w/ 800K MAC EXT. FDD, loads of software. \$475/OBO.** (415) 921-7450.

**Quadra 800 (8/230), Apple 14" color monitor, extended keyboard, new, warranty card, \$3299.** Grant (408) 927-0730.

## Hardware

**286-12 1MB, Everex/3000 1MB, Seagate ST-251-1, WD controller, 14" mono, I/O cards. Offer.** (408) 985-0405.

**CD-ROM library mechanism 200 capacity with 2 CD-ROM drives HP-60C \$8500/OBO.** (619) 632-9775.

**Centris 650 (8/80), FPU, Ethernet, Apple 14" color monitor, extended keyboard, new \$2199, Gil.** (415) 965-7400 x211.

**SVGA NI 1024-768 .28 color monitor \$150/OBO. 5.25 TEAC floppy \$25, 3.5 Sony floppy \$25, IBM XT clone w/ 640K, color monitor, 40MB HD \$200/OBO.** (510) 779-0414.

**Macc IIx 8/40 two floppy drives, color card, keyboard. \$895.** John (408) 492-4536.

**AMIGA 2500 for sale.** Perfect for starting your Video Productions. Great Price. Call David (510) 351-1287.

**SUN 3/40 12MB RAM, Shoebox with 327MB disk + 60MB tape, SUN OS 4.1.1 19" mono monitor \$1000.** (408) 942-9990.

**486-33DX 256KC 8MB RAM, 670MB disk, SCSI Adaptec 1542B, 150MB tape backup, 14" SVGA/NI, Soundcard, 2FDD/mouse, \$1700.** (408) 942-9990.

## Hardware Wanted

**Don't toss the old computer!** Put it to good use in a worthwhile cause. Looking for computers and helpmates to set up a WORLD NETWORK of penfriends and resources. Have 30,000 letters from around the world to start. Tremendous potential! Marie (415) 337-4261.

**HP Laserjet III. PCR 408-453-9322.**

**Apple IIe and GS Donations for children's literacy project.** Tax deductible. Media Learning Center (415) 456-4854.

**WANTED: Working Mac Keyboard, computer monitor for growing non-profit organization. Tax deductible donation.** Call NURTURE (408) 722-8780.

**WANTED: 32 bit memory expansion board for RST 386 cache series system board.** (415) 345-4076.

**High school seeks donation of Macintosh LC/IIc or equivalent for Mathematics/Science instructional program. High lumen overhead projector also needed.** James (415) 355-4683 eves.

**WANTED: Used Toshiba T1000 Laptop computers. Will pay top dollar.** Call John at (408) 496-6683.

**Top \$\$\$ paid. Memory, disk drive, CPU. Sun and PC.** (408) 955-9080.

# Disk Drive Depot

## DRIVE SALE

**Syquest 44MB Removable, Internal† ....\$149**  
**NEC CD-ROM Drives, SCSI, from†... \$159**  
**Abaton OCR Scanner, SCSI, with Feeder.. \$295**  
**1GB, SCSI, Removable, Optical, External†.. \$1295**  
**NEW AK-47 SCSI-II VESA Controller.. \$149**  
**Ethernet Cards, 8 Bit, Coax...4 for ..\$99**  
**Maxtor 213MB, 14ms, SCSI, Internal†.....\$229**  
**Micropolis 1GB, SCSI-II, 14.5ms, NEW.. \$895**  
**Adobe Photoshop&ATM with trackball....\$179**

Your one stop discount drive source! Call or fax today! 500 Lawrence Expressway • Sunnyvale • CA  
Stop by our newly expanded showroom soon!! Open M-F 10:30-6:30, Sat 11-6  
† denotes refurbished

**(408) 738-3895 • Fax (408) 738-3896**

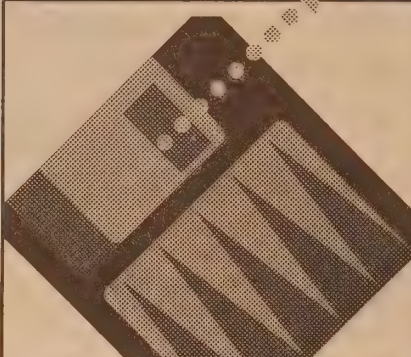






## Services

### SOFTWARE DUPLICATION



### Complete Software Manufacturing Solutions

- Duplication 100% Guaranteed
- Highest Quality Media & Equipment
- 24-Hour Turnaround
- Custom Labels/Sleeves/Manuals
- Packaging, Assembling & Shrink-Wrapping
- Warehouse & Fulfillment
- Graphic Design & Advertising Services
- Ultra-Competitive Prices

**APC, Inc.**

29620 Union City Blvd. Union City, CA 94587  
Local 510-489-8677 Fax 510-489-8678

**800-666-1007**

## Services

### DATA RECOVERY SERVICES

- ★Specializing in data retrieval from hard drives with electronic or mechanical failures
- ★Comprehensive software data recovery from hard drives, floppies, and tape
- ★Over 2,000 successful data recoveries

### DRIVE REPAIR SERVICES

DATA RECOVERY and DISK DRIVE REPAIR

-2122 Adams Ave. San Leandro, Ca. 94577  
-(510) 430-0595 FAX (510) 430-0145  
-6151 Golfview Dr. Bloomfield Hills, Mi. 48301  
-(313) 645-6211

**DOS - NOVELL - UNIX - MAC - OS/2**

**DEENS ELECTRONICS** PH: 510-657-5439; 510-713-1975  
LASER PRINTER PARTS, SALES & SERVICE FAX: 510-657-6079; 415-966-1081

HP, APPLE, CANNON, PANASONIC, ETC.  
24 HOUR TURNAROUND TIME.  
COST EFFICIENT ONSITE SERVICE.  
120 DAYS WARRANTY.  
WE BUY, SELL USED PRINTERS, FUSERS,  
ROLLERS, CARTRIDGES, ELECTRONIC  
ASSEMBLIES AND PARTS.

### SUMMER SPECIAL

SX FUSER REPAIR/EXCH. -\$48  
AVAILABLE IN SEPTEMBER  
SX FUSER ROLLERS \$4.95

## Services

### DATA RECOVERY SERVICES

Specializing in data retrieval from hard drives with electronic or mechanical failures  
Comprehensive software data recovery from hard drives, floppies, and tape  
Over 2,000 successful data recoveries

### DRIVE REPAIR SERVICES

DATA RECOVERY and DISK DRIVE REPAIR

-2122 Adams Ave. San Leandro, Ca. 94577  
-(510) 430-0595 FAX (510) 430-0145  
-6151 Golfview Dr. Bloomfield Hills, Mi. 48301  
-(313) 645-6211

**DOS - NOVELL - UNIX - MAC - OS/2**

## Slides

### Slides \$8

4x5 Transparencies

**PC Imaging Specialists**

Presentation Graphics  
Quattro Pro  
.TGA .PCX .TIF .GIF

Mac/Win Imaging  
Tel: (408) 252-6268  
Fax: (408) 252-6268

## Software

**Novell Netware v3.1120-user.**  
Two packages left in stock.  
\$1600 new. Out of business.  
(415) 343-7659.

**Windows Discount**  
Shareware offers your choice  
of 2,700 Windows programs  
shipped on 1.44 MEG disks.  
Don't pay \$1.00 to \$4.00 when  
we distribute exactly the same  
thing for only 35 CENTS each.  
Latest versions, virus free. 100  
to 250 added monthly. Thou-  
sands of satisfied customers  
worldwide. For 1.44 MEG di-  
rectory disk listing all 2,700  
Windows programs, viewable  
on screen, send \$2.00 to PO  
Box 1912, Binghamton, NY  
13902-1912.

**FREE IBM SOFTWARE CATA-  
LOG.** Low Prices, Best Sele-  
ction, ASP Vendor - BRIGHT  
IDEA! SOFTWARE, 5339 Pros-  
pect Road, Suite 197M, San  
Jose, CA 95129. VOICE/FAX  
408-252-0542.

**PC Tools \$20.** AmiPro 20 \$30.  
Winsleuth Gold Win \$30. 386  
MAX \$20. Call Katia (408)  
479-4925.

**QuattroPro 4.0 \$40.** QuattroPro  
Win \$40. Norton Desktop 2 \$40.  
Windows Draw 3 \$40. (408) 479-  
4925. Marcelo.

**Selling Out! Make offer on any/  
all:** ImageStudio, PicturePress  
2.0, Taste, GreatWorks 2.0,  
Quicken, MORE 3.1, BizPlan  
Builder, SAM 3.0, NUM 2.0,  
FastTracker Scheduler 1.5, Spec-  
tre, MacRaquetball, WriteNow 2.0,  
MacLink Plus, NDW, On Target,  
PS/2 3.5" drive, Hayes 1200 &  
Epic 2400 modems. 415/365-  
8072.

### WE WILL BEAT ANY ADVERTISED REPAIR & SALE PRICE

| HARD DRIVE  | REPAIR          | PRICE         | *DATA RECOVERY           |
|-------------|-----------------|---------------|--------------------------|
| CAPACITY    | MFM/<br>IDE/RLL | ESDI/<br>SCSI | MFM/RLL/IDE<br>ESDI/SCSI |
| 10 - 19MB   | \$40            | \$45          | \$180                    |
| 20 - 29MB   | \$45            | \$50          | \$230                    |
| 30 - 39MB   | \$55            | \$60          | \$280                    |
| 40 - 49MB   | \$65            | \$70          | \$330                    |
| 50 - 85MB   | \$90            | \$95          | \$380                    |
| 86 - 119MB  | \$100           | \$105         | \$430                    |
| 120 - 160MB | \$110           | \$115         | \$480                    |
| 161 - 230MB | \$130           | \$135         | \$530                    |
| 231 - 330MB | \$160           | \$160         | \$580                    |
| 331 - 430MB | \$200           | \$205         | \$630                    |
| 431 - 700MB | \$230           | \$235         | \$680                    |

\* Data recovery includes repair of the drive.  
\*No charge if we are unable to recover data.

| FLOPPY DRIVE REPAIR PRICE         | INSTALLATION          |
|-----------------------------------|-----------------------|
| 5.25" (360K & 1.2MB).....\$20     | HARD DRIVE.....\$30   |
| 3.5" (720K & 1.4MB).....\$25      | FLOPPY DRIVE.....\$15 |
| 3.5" PS/2 (720K & 1.4MB).....\$35 |                       |

### MONITOR REPAIR PRICE (12" & 14")

| MONITOR            | QUANTITY | 1    | 2-5 | 6-10 | 11+ |
|--------------------|----------|------|-----|------|-----|
| Any Mono           |          | \$39 | 37  | 35   | 33  |
| Any CGA            |          | \$55 | 53  | 51   | 49  |
| Any EGA            |          | \$59 | 57  | 55   | 53  |
| Any VGA            |          | \$69 | 67  | 65   | 63  |
| Any Super VGA      |          | \$75 | 73  | 71   | 69  |
| Any Multisync      |          | \$89 | 87  | 85   | 83  |
| Any Mono Terminal  |          | \$65 | 63  | 61   | 59  |
| Any Color Terminal |          | \$89 | 87  | 85   | 83  |

CRT AND FLYBACKS EXCLUDED

FREE Pick-up & Delivery in O.C. if More Than Five Monitors

### SPECIAL SALE OF THE MONTH

| HARD DRIVE                               |      |                |      |       |
|------------------------------------------|------|----------------|------|-------|
| CONNER/SEAGATE/WESTERN DIGITAL           |      |                |      |       |
| 130MB                                    | IDE  | NEW            |      | \$165 |
| 170MB                                    | IDE  | NEW            |      | \$179 |
| 210MB                                    | IDE  | NEW            |      | \$195 |
| 260MB                                    | IDE  | NEW            |      | \$219 |
| 340MB                                    | IDE  | NEW            |      | \$289 |
| 425MB                                    | IDE  | NEW            |      | \$419 |
| 450MB                                    | IDE  | NEW            |      | \$439 |
| *1 Year Warranty On New Hard Drive       |      |                |      |       |
| Seagate                                  | 20MB | MFM            | REF. | \$55  |
| Seagate                                  | 40MB | MFM            | REF. | \$85  |
| Seagate                                  | 30MB | RLL            | REF. | \$60  |
| Tandon                                   | 40MB | RLL            | REF. | \$65  |
| Miniscribe                               | 20MB | SCSI           | REF. | \$50  |
| *6 Months Warranty On Refurbished Drive. |      |                |      |       |
| FLOPPY                                   |      | CONTROLLER     |      |       |
| 1.2MB TEAC NEW                           | \$46 | MFM (AT or XT) | \$39 |       |
| 1.44MB TEAC NEW                          | \$41 | RLL (AT or XT) | \$39 |       |
| (1.2; 1.44MB) REF. (\$39; \$35)          |      | IDE w/I/O      | \$14 |       |

### PRO COMPUTER COMPANY



12761 Western Ave., Suite B  
Garden Grove, CA 92641  
Tel.: (714) 891-8293  
Fax: (714) 891-3269  
Business Hours:  
8:30am to 6:00pm Mon. thru Fri.  
Sat. 10:00am to 4:00pm  
Prices subject to change w/out notice.

### FOR HIRE...Typist--2,500 WPM



Any Printed Material Into Any IBM  
or Mac Program...FAST!

**1-800-300-SCAN**  
Same Day Service

Why buy expensive hardware and software?  
Use our cost-effective quality service.

**SCAN  
TYPE**  
Scanning/OCR Services

### START YOUR OWN BUSINESS

Learn How to:

- Recycle Laser Printer & PC Copier Toner Cartridges
- Repair/Maintain Laser Printer & PC Copier

Call: **LASER GURU** for more info.

**(408) 428-0533**

### DATA RECOVERY

Specializing in DOS, NOVELL, & MACINTOSH.  
Self Engineered Tools Provide Over 90% Success Rate • Competitive Prices

**Micro Storage**

2245 First Street, Suite 116 Tel (805) 582-9101  
Simi Valley, CA 93065 Fax (805) 582-9102

## Software

## Software

### Mac-In-DOS

### SOFTWARE BREAKTHROUGH!!!

Allows PC to read/write MAC 1.44 high density diskette. Exchange  
of text, binary & graphics files between Mac & DOS IS NOW  
POSSIBLE with this software. No cable or hardware is needed

**Also Available...**

on SUN, IBM, HP, SCO, Interactive UNIX.

**Pacific Micro**

(415) 948-6200

To Order Call 1-800-628-DISK



# Classifieds Consultants Network

## Software

## Software

## Software

## Engineering

## General

### I'll Be Back!

#### "While you were out" system for Windows

- Post messages on the screen of your IBM PC or compatible
- Let others leave messages for you
- Lock system to prevent unauthorized user access
- Place your own bitmap on the screen in ScreenSaver™ Mode

Show Special  
\$39.95

\$69.95

I'll Be Back!

Pacific Micro

201 San Antonio Circle, C250  
Mountain View, CA 94040 USA  
Tel: (415) 948-6200  
Fax: (415) 948-6296

Pacific Micro is a trademark of Pacific Micro Electronics, Inc.  
Windows is a registered trademark of Microsoft Corporation

#### 12 Calligraphic Fonts for Windows & WP6.0, \$9.95

Calligraphy CALLIGRAPHY calligraphy Calligraphy Calligraphy Calligraphy  
Calligraphy calligraphy CALLIGRAPHY calligraphy Calligraphy calligraphy  
Calligraphy Calligraphy CALLIGRAPHY calligraphy Calligraphy calligraphy  
Calligraphy CALLIGRAPHY calligraphy Calligraphy calligraphy Calligraphy  
Calligraphy calligraphy CALLIGRAPHY calligraphy Calligraphy calligraphy  
Calligraphy Calligraphy Calligraphy Calligraphy Calligraphy calligraphy

Two copies PacerTerm 2.0  
Communications software,  
unopened. List \$200+ each,  
make offer. Craig (415) 346-  
3921.

CA SuperProject for Windows.  
Unregistered. \$199/OBO.  
(510) 674-9381.

Asian Nudes! Exotic women  
of the Orient! \$5 for 1.44MB  
sampler. Cyber-Graphix, 2040  
Polk #317M, San Francisco, CA  
94109. Must state over 21!

Macintosh fonts. 178 different  
TrueType typefaces on 15 disks.  
Send \$39.98 to Cabot Cove  
Technologies, 21595 Monrovia  
Street, Cupertino, CA 95014.

Excel 3.0, Word 1.1, Quattro  
3.0, Norton Utilities 6.0. \$25  
each. Call Alex (510) 845-1008.

Borland C++ w/ application  
frameworks 3.1 \$350. Call  
Melissa (510) 643-3213.

OS/INDY - Real Men don't  
carry purses. Real Men don't  
carry stenopads. Real Men  
don't like carrying anything big-  
ger than their wallets. Real  
Men know how to point and  
shoot. In Cyberspace, Real Men  
pack HEET with firepower.  
CODE 10 Microdeck from Quintal  
Research Group, Inc., 537  
Valley Street, San Francisco,  
CA 94131- Excellence in  
Vaporware-

NOVELL NETWORK NAVIGA-  
TOR v2.0 10 user. New, sealed  
box. 3.5" and 5.25" disks. \$995/  
OBO. (408) 741-2181.

WINGZ 1.1a for Windows and  
OS/2 Graphical spreadsheet  
by Informix. New, unopened.  
\$200/OBO. Bill (415) 594-  
3271.

### Software Wanted

NEW SOFTWARE PRODUCTS  
WANTED...To acquire/  
license...By Small Successful  
Software Co...fax brief synop-  
sis of software capabilities &  
target market to: PERFECT  
NICHE SOFTWARE, INC. Fax:  
(415) 331-4200.

WANTED: FOR IBM - Plots  
Unlimited, Storyline, Collabo-  
rator, First Aid 4 Writers. (206)  
573-8594.

### AutoCAD R12 for Macintosh

Upgrade or new purchase available now.  
We train and support R12 on Macintosh.

#### Murtaugh Represents:

AutoCAD • Gibbs ncCAM • Vellum 3D



AUTODESK (800)  
Authorized Dealer 404-9105

## General

### LOOKING FOR SMALL BUSINESS SOLUTIONS?

LET US MAKE YOUR PERSONAL COMPUTERS WORK FOR YOUR BUSINESS

PAY ONLY  
FROM INCREASED  
PROFITS

CALL  
408/226-2646  
TO FIND OUT HOW!

Specialists in Small Business Improvements

### MERIT

Software Systems

Software development in Clipper, Paradox,  
C++ for DOS/Windows. Network Installation.  
(707) 552-2618

### GET MORE OUT OF YOUR COMPUTER!

Friendly computer wizard with experience will help maximize  
your use of: ■ Accounting ■ Word Processing  
■ Database ■ Spread Sheet  
Free first consultation • Sampson Information Systems  
415/469-9852

## Professional Technical Services

### DOS, Windows & OS/2 support for business

- Setup & configuration • Networks • Communications •
  - On-site support • Data recovery • Programming • Debugging •
- Database & Spreadsheet programming - Excel & Paradox  
On-site support available 24 hours a day - 7 days a week

John Purins

415-340-1744

## LAN

LANtastic Networks. Installa-  
tion & Configuration. PC Con-  
sulting & System Integration.  
Paradigm Micro Systems.  
(510) 357-1042.

COMPUWELL NETWORKS.  
The easiest, fastest and most  
economical way to network  
your office. Novell Lite or  
LANtastic starter kit for 2 sta-  
tions only \$259. VARS and  
resellers welcome! Hector  
(415) 821-0122. Pager (415)  
915-0346.

#### NOVELL SPECIALIST

-Install, Service, Troubleshoot  
-Custom Network Software  
-Backup Service & Data Recovery  
-Certified NetWare Engineers  
ABSOLIC COMPUTING  
(415) 858-2680

#### NOVELL NETWORKS, CNE.

- Design and Installation  
- Hardware and Software  
Configuration  
- Support and Service  
- Free Consultation  
COMTEQ COMPUTER CO.  
(408) 988-4440

#### NOVELL NETWORKS, CNE.

- Design and Installation  
- Hardware and Software  
Configuration  
- Support and Service  
- Free Consultation  
COMTEQ COMPUTER CO.  
(408) 988-4440

## Legal

INCORPORATION. Nevada  
\$399, CA \$299. Do yourself  
books Trademark, Copyright,  
Patent (408)559-3949.

# Consultants Network

## Accounting

### How do smart businesses "Account" for themselves?

They use State of the Art, Inc.'s "MAS\*90" on IBM  
& compatibles, or MacP&L on a Macintosh.



COMPUTER  
ACCOUNTING  
SYSTEMS

provides Sales, Training and Support as an  
Authorized Consultant and Reseller.

14 Commercial Blvd., #127 • Novato, CA 94949  
Call (415) 883-0787 for details!

Profit Improvement and Deci-  
sion Making Help, Cash Man-  
agement, Installing Accounting  
Systems, Business Plans, LEN  
MARSH, Part-time CFO 415-  
286-7527.

## Engineering

Analog/Digital/Circuit/Sys-  
tems Design. Software: As-  
sembly/C. Call for details.  
FTE, Inc., Fred Tanaka (510)  
782-4223.

## Engineering

THE PCB CONSULTANTS  
High quality PCB design and  
schematic capture supports:  
PADS/2000, PCAD, ORCAD  
Leaded or SMT any layers  
\$1.25/pin manual route  
Free estimate fast turnaround  
Phone (510) 429-6238  
Message/FAX (510) 795-8089

#### Ludiek Design Inc

Turn-key Engineering  
Services  
Mechanical ~ Hardware  
Software ~ PC Boards  
Technical Documentation  
Ph/FAX 408/462-2722  
3567 Benton Street, Suite 343, Santa Clara, CA 95051

Expert Microcontroller Based  
System/Product Development.  
Call for information and data  
sheet detailing our money and  
time saving techniques.  
COMPUMATE: (510) 689-  
7012.



# Consultants Network

## LAN

**INTERLINK**  
Professional Network Consultants  
•Installations •Design •LAN Migrations  
•Maintenance •Add-Ons •Diagnostics

**NOVELL**  
•Low Rates (Hr/Flat) •Free Estimates

**STARTER KITS**  
»30 DAY FREE SUPPORT«  
5User Kit .....\$1199.00  
(NetWare 3.11 & 3c509)  
2User Kit .....\$399.00  
(NetWare Lite & 3c509) Labor Not Included

**SERVICES**  
•NetWare (3.X,4.0,Lite)  
•Multi-Protocol LAN's  
•FDDI/10BASE-T/Coax  
•TCP/IP (ODI or NDIS)  
•DOS/OS-2/Windows

\*Prices subject to change w/o notice \*All trademarks belong to respective owners

**(408) 243-4223**

## Legal

**IMMIGRATION**  
Law Offices of Paul M. Heller  
Specializing in  
Labor Certification &  
Work Visas  
for  
Engineering, Computer,  
Accounting, Business, &  
other Professionals.  
Also: family visa/US  
spousal cases; change to  
student (F-1) status;  
Treaty Trader/Investor  
(E-1/E-2); Intra-company  
transferee (L-1).  
Individual, Bus. & Corp.  
Clients  
**Free Consultation!**  
**415-291-8000**

## Programming

**Programming, Assembly,**  
8096 8051. Free TANGO-  
ROUTE PRO demo at your site.  
Labtex, (408) 377-4824; fax  
(408) 559-7630.

**FILEMAKER PRO FOR MACS**  
& PC'S. We specialize in data-  
base programming for small  
businesses. We can either  
teach you how to use Filemaker,  
or we can set up a database for  
you to use. We also use Excel,  
Word, Quark, Pagemaker, Ac-  
cess, Wordperfect, Foxbase+,  
and others. Phone: 415-552-  
5120 San Francisco. Gerald A.  
Matoi & Assoc.

**Costly to get help?** From your  
idea to software package.  
ARYAN (415) 928-7125.

**Offshore programming.**  
FoxPro/Clipper/dBase/Para-  
dox. Summit Software (510)  
846-7647.

## Programming

only the Best or the No. 1

**TeleMagic NetWare**  
Number One in Sales and Business Automation.  
It's Flexible, Customizable, Easy to Learn & Use!  
The No. 1 installed base, the Undisputed Champion  
of Highest-Performance, 32-bit Network O.S.  
plus UnixWare, SCO UNIX, EDI for Windows, Accounting  
software, FAX server, CD-ROM server, and Multimedia CD.

**V88 Systems, Inc.** 1538 Centre Pointe Dr., Milpitas, CA 95035 **(408) 957-5738**

We provide:  
design,  
installation,  
setup,  
support &  
service.

**PARADOX**  
✓ On-Site Training  
✓ Applications  
✓ Troubleshooting  
OTM ENT. 510-886-1557

## Programming

**MACINTOSH MY SPECIALTY**  
Spreadsheet • Database • System Programming  
Installation, training, troubleshooting  
purchase advice — Mac and PC  
Stanford C.S. degree • good references  
Ken Brooks 415/856-1224 Palo Alto

**Software Solutions Unlimited** (408) 236-3723  
Fast! Fast!! Mac Prototypes!!!  
Fast Mac Application Development!  
Software Testing/Quality Assurance: Mac and IBM  
Application Porting from DOS/Windows, UNIX, Apple II, etc.  
(to the Apple Macintosh)  
**GREG HOLEND**  
Prototypes • Applications • Porting • Testing

## Database Programming

- ◆ FoxPro
- ◆ Clipper
- ◆ dBase IV
- ◆ Windows or DOS
- ◆ Accounting systems
- ◆ Bar code systems
- ◆ Multi-user
- ◆ Complete support

**AccounTech**  
408/266-2660  
Since 1983 ♦ Member BBB

**CUSTOM DATABASES** FoxPro,  
FoxBase, dBase, Clipper,  
Paradox. Multi-user systems,  
software modifications, code  
generators, PC/LAN, SBT.  
Walter St. John: voice (510)  
548-0129; pager (510) 310-  
2080.

**BAR CODE INVENTORY.** Effi-  
cient "C" Systems. Quick De-  
livery. National References. 1-  
800-872-1182.

**Software Engineering & De-  
sign.** Specializing in SCSI driv-  
ers and Macintosh applications.  
Experience with Think C++ 6.0,  
680x0 assembly, MPW, and  
ResEdit. Call Michael at Willow  
Software. 408/748-8540.

**50% OFF YOUR COST.** DATA  
ENTRY, S/W DEVELOPMENT,  
DOS/AS/400/WINDOWS. CON-  
TACT FAREAST DATA CO. TEL.  
& FAX (408) 249-8344.

## Tech Writing

**SOFTWARE DEVELOPERS.** We  
will write, illustrate, layout, de-  
sign, typeset, print YOUR tech  
pubs. Call 408-559-DESK.

**Documentation, customized  
manuals,** help text and training  
materials for your software or  
application. Larry (415) 692-  
0824.

**Spanish Translation.**  
Accurate technical translation  
of manuals, instructions, let-  
ters messages. Carrali Design  
(408) 737-8196

## Training

**CLIENT/SERVER COMPUTING**  
TRAINING WORKSHOP: MOVE  
UP WITH DATABASE TECH-  
NOLOGY. Learn Oracle,  
Sybase, Gupta and Access in  
small class. Equip yourself to  
meet career and downsizing  
challenges. CompuEd (408)  
253-4508.

## Training

**Computer Training**  
Hands-On Training for the PC & Mac  
\$129 full day  
\$69 half day  
WORKS QUICKEN  
QUICKBOOKS  
POWERPOINT  
PERSUASION  
PAGEMAKER  
PAGEPLUS  
FRAMEMAKER  
and many more!

**InfoMind**  
408/243-1121

**CA. Systems**  
Training - Sales - Setup  
Support - Installation  
**Authorized Trainers for:**  
DacEasy  
TeleMagic  
One Write Plus  
AccPac BPI  
AccPac Simply Accounting  
Novell System Admin.  
SCO Unix System Admin.  
monthly classes  
**(415) 365-2050**

**Flexible, Affordable Instruction**  
WordPerfect, Lotus 123, Excel, FoxPro  
Windows, MS Word, etc. All beginning  
classes 9-12AM \$55. Full day classes  
9-4PM \$110 or special arrangement. Your  
site or ours, we'll beat any adv. price.  
\$501 680 9th Street (415) 252-1547

**MACINTOSH AND IBM-PC**  
TRAINING Learn Windows,  
Excel, Clarisworks, MS Works,  
Workperfect, Word,  
Pagemaker, or Filemaker Pro,  
at your home or office. Phone:  
415-552-5120 San Francisco.  
Gerald A. Matoi & Assoc.

## Hands-on Hardware Training

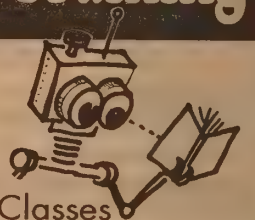
Call Now for brochure & schedule

- Classes Limited to 6 Students
- PC Clone Troubleshooting
- Intensive 2-day Hardware & LAN Classes
- Network Installations - Lantastic to Novell
- NEW! Laser Printer Maintenance
- NEW! CNE Study Group - Hardware Focus

Highly rated classes range from \$75 to \$290

**(510)-836-2040**

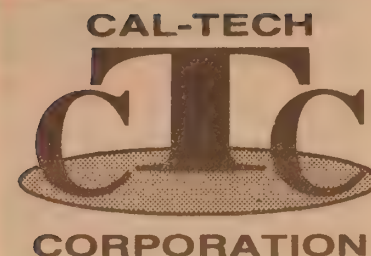
**EXCEL MICRO SOLUTIONS**  
1730 Franklin St, Oakland CA





# Highest Quality with Lifetime Labor

Custom Configuration Available



## SYSTEMS

### 486-66 VLB EISA 16MB, 425MB, SVGA MULTIMEDIA SYSTEM

- Intel 486DX2-66 CPU with Cooling Fan
- VLB OPTi Motherboard w/256K Cache
- 16MB RAM
- 425MB WD Hard Drive
- Teac 3.5" & 5.25" Floppy Drives
- VLB IDE + I/O Controller
- VLB Diamond Stealth Pro w/1MB
- Pro Audio Spectrum Sound Card
- Toshiba 3401B CD-ROM Drive
- Viewsonic 15, 15" NI .28 SVGA Monitor
- Medium Tower w/230W PSU
- Enhanced Keyboard
- Microsoft Compatible Mouse
- Pair of Speakers

**\$2995**

### 486-33/40 VLB 4MB, 250MB, SVGA MULTIMEDIA SYSTEM

- Intel 486DX-33 CPU/AMD 486DX-40 CPU
- VLB OPTi Motherboard w/128K Cache
- 4MB RAM
- 250MB Conner Hard Drive
- Teac 3.5" & 5.25" Floppy Drives
- VLB IDE + I/O Controller
- VLB Diamond Stealth 24, w/1MB
- Sound Blaster Pro Deluxe
- Panasonic 562 CD-ROM Drive (320ms 300K/s)
- 14" NI .28 SVGA Monitor
- Medium Tower w/230W PSU
- Enhanced Keyboard
- Microsoft Compatible Mouse
- Pair of Speakers

**\$1665**

### 486-66 VLB 8MB, 340MB, SVGA SYSTEM

- Intel 486DX2-66 CPU with Cooling Fan
- VLB OPTi Motherboard w/128K Cache
- 8MB RAM
- 340MB Hard Drive
- Teac 3.5" & 5.25" Floppy Drives
- VLB IDE + I/O Controller
- VLB Diamond Stealth 24 w/1MB
- 14" .28dp NI SVGA Monitor
- Medium Tower w/230W PSU
- Enhanced Keyboard

**\$1795**

### 486-33/40 VLB 4MB, 250MB SVGA SYSTEM

- Intel 486DX-33 CPU/AMD 486DX-40 CPU
- VLB OPTi Motherboard w/128K Cache
- 4MB RAM
- 250MB Conner Hard Drive
- Teac 3.5" & 5.25" Floppy Drives
- VLB IDE + I/O Controller
- VLB Windows Acc. w/1MB
- 14" .28 NI SVGA Monitor
- Mini Tower w/230W PSU
- Enhanced Keyboard

**\$1245**

## MULTIMEDIA SPECIALS

### WINSOUND 16

- Pro Audio Spectrum 16 w/SCSI & Sony Interface
- Stereo Speakers
- Lots of Software Including:  
CD-ROM Drivers & Utility Programs
- 5-Year Warranty!

**\$129**

- Toshiba 3401B CD-ROM Drive.....\$389  
(200ms, 330K/s, Photo-CD Multisession, SCSI-2 Int.)
- Sony CDU-561 CD-ROM Drive.....\$359  
(285ms, 350k/s, Photo-CD Multisession, SCSI-2, Int.)
- Teac CD-50 CD-ROM Drive .....\$319  
(265ms, 335k/s, Photo-CD Multisession, SCSI-2 Int.)
- Texel 3024 CD-ROM Drive .....\$319  
(265ms, 300k/s, Photo-CD Multisession, SCSI-2 Int.)
- Panasonic CR-562B CD-ROM Drive .....\$209  
(320ms, 300k/s, Photo-CD Multisession, AT Int.)
- Sound Blaster Pro Deluxe w/AT Interface .....\$99
- For Encyclopedia.....Add 15
- Sound Blaster T6 ASP w/AT Interface.....184
- For Encyclopedia.....Add 15
- AT Interface Card w/Cable .....9

## ACCESSORIES

### HARD DRIVES • FLOPPY DRIVES • TAPE DRIVES

|                                         |      |
|-----------------------------------------|------|
| 3.5" 1.44MB TEAC Floppy Drives .....    | \$38 |
| 5.25" 1.2MB TEAC Floppy Drives .....    | 45   |
| 250MB IDE WD/Maxtor/Conner .....        | 209  |
| 340MB IDE WD/Maxtor/Conner .....        | 269  |
| 425MB IDE WD .....                      | 399  |
| Archive XL 9250I, 250MB Tape Drive..... | 125  |
| 250MB Colorado DJ-20 Tape Drive .....   | 164  |

### VIDEO CARDS

|                                       |      |
|---------------------------------------|------|
| VLB Oak, 1MB .....                    | \$69 |
| VLB Cirrus Logic 5426, 1MB .....      | 83   |
| VLB Diamond Stealth 24, 1MB .....     | 145  |
| VLB Diamond Stealth Pro, 1MB .....    | 245  |
| VLB Diamond Viper, 2MB .....          | 375  |
| VLB Orchid Fahrenheit, 1MB .....      | 135  |
| VLB ATI Graphics Ultra Pro w/2MB..... | 325  |

### CASES

|                               |      |
|-------------------------------|------|
| MiniTower w/230W PSU .....    | \$44 |
| Medium Tower w/230W PSU ..... | 63   |

### CONTROLLER CARDS

|                                        |      |
|----------------------------------------|------|
| IDE + I/O (2S/1P/1G) .....             | \$13 |
| VLB IDE + I/O (2S/1P/1G) .....         | 33   |
| VLB IDE Cache, Promise DC-4030VL ..... | 129  |
| ISA Adaptec 1542CK SCSI .....          | 229  |
| EISA Adaptec 1742A SCSI Master.....    | 335  |
| VLB Ultrastor 34F SCSI .....           | 259  |

### MOTHERBOARDS • CPU • MEMORY

|                                                            |       |
|------------------------------------------------------------|-------|
| VLB Intel/AMD 486DX-33/40 w/128K, Forex Chipset.....       | \$355 |
| VLB Intel/AMD 486DX-33/40 w/128K, Opti Chipset .....       | 369   |
| VLB Intel 486DX2-66 w/128K Forex Chipset .....             | 554   |
| VLB Intel 486DX2-66 w/128K Opti Chipset .....              | 569   |
| VLB + EISA Intel/AMD 486DX-33/40 w/256K Hint Chipset ..... | 489   |
| VLB + EISA Intel 486DX2-66 w/256K Hint Chipset .....       | 689   |

|                                           |      |
|-------------------------------------------|------|
| Heat Sink w/Cooling Fan for 486 CPU ..... | 8    |
| CPU .....                                 | CALL |
| Memory .....                              | CALL |

### FAX/MODEM

|                                                |       |
|------------------------------------------------|-------|
| US Robotics Sportster 14.4/14.4 Internal ..... | \$159 |
| US Robotics Sportster 14.4/14.4 External ..... | 179   |
| Generic Rockwell 14.4/14.4 .....               | 125   |
| Generic 96/24 .....                            | 34    |

### MONITORS

|                                    |       |
|------------------------------------|-------|
| 14" Interlaced, .39dp .....        | \$195 |
| 14" Interlaced, .28dp .....        | 219   |
| 14" Non-Interlaced, .28dp .....    | 255   |
| 15" Non-Interlaced, .28dp .....    | 359   |
| KFC 17" .26dp Non-Interlaced ..... | 759   |

- Viewsonic 6E, 14" .28dp N-I  
1024x768 Monitor N-I .....\$279
- Viewsonic 15, 15" .28dp 1280x1024  
Low Radiation Monitor .....\$459



**Cal-Tech Corporation**

29640 Union City Blvd • Union City, CA 94587

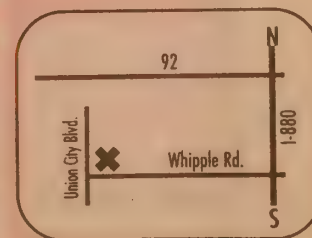
Lifetime Labor & 1 Year Warranty On All Systems  
Dealer Inquires & International Orders Welcome

Price & Availability subject to change w/o notice • Not responsible for typos • Ad reflects cash discount

**(510) 487-9578**

Fax (510) 487-9609

Hours: 10am-6pm, Mon.-Fri.  
Sat. & Sun. By Appointment





# Serving You for Over 8 Years!

## Hard Disks • Monitors • Printers

### MAXTOR

|                                           |       |
|-------------------------------------------|-------|
| 131MB 14ms IDE 7131A.....                 | \$175 |
| 245MB 15ms IDE 7245A.....                 | 235   |
| 340MB 13ms IDE 7345A.....                 | 299   |
| 535MB 13ms SCSI/IDE MXT-540A/S.....       | 745   |
| 1.2GB SCSI MXT-12405 256K 8.5ms 3.5"..... | 1154  |
| 1.7GB SCSI DI-175 13ms FM.....            | 1149  |

### FUJITSU

|                                 |       |
|---------------------------------|-------|
| 525MB IDE/SCSI 11ms M2624T..... | \$615 |
| 1.2GB SCSI 14ms FM.....         | 1079  |

### CONNER

|                             |       |
|-----------------------------|-------|
| 120MB 19ms IDE 30104.....   | \$172 |
| 250MB 14ms IDE CP30254..... | 235   |

### WESTERN DIGITAL

|                            |       |
|----------------------------|-------|
| 213MB 15ms IDE WD2200..... | \$215 |
| 250MB 14ms IDE WD2250..... | 235   |
| 340MB 12ms IDE WD2340..... | 295   |
| 420MB 14ms IDE WD2420..... | 445   |

### QUANTUM

|                                     |       |
|-------------------------------------|-------|
| 127MB 32K Cache Fast IDE.....       | \$173 |
| 240MB 256K Cache Fast IDE.....      | 230   |
| 525MB 11ms IDE LPS 525 AT 256K..... | 559   |

### CASE & POWER SUPPLY

|                            |      |
|----------------------------|------|
| Minitower 200 Watt.....    | \$59 |
| Desktop w/200 Watt.....    | 69   |
| Mid Tower w/230 Watt.....  | 99   |
| Full Tower w/230 Watt..... | 129  |

### KENSINGTON

|                              |      |
|------------------------------|------|
| Expert Serial Trackball..... | \$99 |
|------------------------------|------|

### NEW

### MICROSOFT

|                                      |      |
|--------------------------------------|------|
| Microsoft Mouse II PS/2 Version..... | \$89 |
| Microsoft Mouse II Serial.....       | 75   |
| Microsoft Mouse II Bus.....          | 79   |

### Central Point PC TOOLS

For DOS **\$129**  
New! Version 8

The Most Complete Set of  
Award-Winning PC Utilities

For Windows

Simplify and Protect

Your Work In Windows

**\$129**

### DIGITIZERS

#### Summagraphics

Summasketch III NEW  
12"x12" 4-Button Cursor

**\$289**

Summasketch III NEW  
12"x18" Pro, 4-Button Cursor

**\$539**

### Acecad 5"x5" GRAPHICS TABLET

5"x5" Active Area—Includes 2-Button Stylus-Pen  
and Utilities Diskette with Custom Mouse,  
Windows, ADI Drivers, and Windows  
control panel program.

**\$119**

### ViewSonic™

|         |                           |       |
|---------|---------------------------|-------|
| 15" 15" | 1280X1024 .28 NI.....     | \$498 |
| 6e 14"  | 1024x768 .28 NI.....      | 305   |
| 7 17"   | 1280X1024 .28 NI MAC..... | 875   |
| V17 17" | 1280x1024.28NI MACII..... | 1045  |

### NEC

|          |    |               |           |       |
|----------|----|---------------|-----------|-------|
| 15" 3FGE | NI | 1024x768 60Hz | 28mm..... | \$599 |
| 15" 4FGE | NI | 1024x768 76Hz | 28mm..... | 699   |
| 17" 5FGE | NI | 1024x768      | 28mm..... | 1085  |
| 21" 6FG  | NI | 1280x1024     | 28mm..... | 2298  |

### MITAC

|             |                    |       |
|-------------|--------------------|-------|
| 17" SVGA NI | 1024x768 .31.....  | \$509 |
| 17" SVGA NI | 1280x1024 .28..... | 625   |

### MEGA IMAGE

|                |                    |       |
|----------------|--------------------|-------|
| 14" SVGA Int   | 1024x768 .28.....  | \$235 |
| 14" SVGA NI    | 1024x768 .28.....  | 269   |
| 15" SVGA NI TS | 1280x1024 .28..... | 389   |

### VIDEO CARDS

|                                       |       |
|---------------------------------------|-------|
| Orchid P9000/VLB/3MB.....             | \$339 |
| Orchid Fahrenheit VLB.....            | 145   |
| Orchid Fahrenheit 1280 Plus VRAM..... | 119   |
| Diamond Viper VLB 2MB VRAM.....       | 379   |
| Diamond Speedstar Pro VLB.....        | 135   |
| Diamond Stealth 24VLB/ISA.....        | 165   |

### American Power Conversion

#### Backup Power Supplies at Great Prices!

**BK250B** 200-200VA; back-up  
power for 386SX, 286SX, 286,  
XT's and AT's **\$109**  
**BK450** **\$199**

**BK660** Back-up up power for  
heavily configured 386,  
486 systems: CAD/CAM **\$269**  
Call for other models!

**AP900** Smart-Ups 900  
900 VA 286, 386, 486 Servers  
Multiple systems, Longer runtime **\$589**

### ScanMan model 256 & Ansel™ Hand-Held Scanner

ScanMan 256.....**\$179**

ScanManColor  
16.8 Million Colors.....**439**

ScanMan 256  
w/Catchword Pro.....**219**

|                                 |      |
|---------------------------------|------|
| • Serial Mouseman 400dpi.....   | \$69 |
| • Bus Mouseman 400dpi.....      | 69   |
| • Cordless Mouseman 400dpi..... | 99   |
| • Serial TRACKMAN.....          | 89   |
| • Bus TRACKMAN 320 dpi.....     | 79   |
| • First Mouse.....              | 39   |
| • Trackman Portable.....        | 99   |

### TAMARACK

#### Professional Flatbed Color Scanner 600dpi, 24 Bit Optional SKT Slide Scanner

ArtiScan™ from Tamarack gives you state-of-the-art resolution and  
impeccable image quality, 600 dpi, 24 bit per pixel (16 million colors  
and 256 gray levels). Supports both the PC and the Macintosh.

SCSI interface for fast operation.

-w. Publisher 600/800/1200 dpi.....**\$845/1045/1695**

-w. Pub. & OCR 600/800/1200 dpi.....**895/1095/1745**

-w. Photostyler 600/800/1200 dpi.....**995/1195/1845**

-w. Photoshop 2.5 600/800/1200 ..**1045/1245/1895**

### HEWLETT PACKARD

**LaserJet 4/4M.....\$1349/1839**

8ppm, 600x600 dpi, 2/6MB w/Toner

**LaserJet 4SI w/Toner.....2999**

7ppm, Network Compatible, 1MB

**Desk Jet 1200C.....1325**

6PPM 300X300DPI TOY COLOR

**LaserJet 4L w/Toner.....665**

4ppm, 300 DPI, 1M

**DeskJet 550C.....CALL**

300dpi, Color Ink Jet

**DeskJet 500.....CALL**

**DeskJet Portable.....379**

### HP TONER CARTRIDGES

|                                     |      |
|-------------------------------------|------|
| HP 92275A HP IIP, IIP+, IIP.....    | \$79 |
| HP 92295A HP IID, II, III, IVD..... | 89   |
| HP 92291A HP ILsi.....              | 119  |
| HP 92298A HP4.....                  | 99   |

### Laser Printer MEMORY!!

|                     | 1MB | 2MB   | 3MB   | 4MB   |
|---------------------|-----|-------|-------|-------|
| HP/II/III           | N/A | \$125 | \$160 | \$180 |
| HP/II/III/IIID/IIIP | N/A | 125   | 160   | 180   |
| Panasonic KX-P4420  | N/A | 139   | 175   | 189   |
| IBM 4019            | 109 | 149   | 309   | N/A   |
| Epson EPL-6000      | 140 | 155   | 190   | N/A   |
| Epson EPL-7000      | N/A | 90    | 140   | N/A   |
| Okidata 400/800     | 100 | 150   | N/A   | N/A   |
| Brother HL-4        | 130 | 180   | 230   | 280   |

### KX-P4430

Laser Printer  
**NEW!**

**\$695**

- 1MB RAM exp to 5MB
- PCL-5 Scalable
- 300 dpi resolution • 5PPM
- 200 sheet paper capacity

### KX-P4410

Laser Printer

**\$589**

- 512K RAM exp. to 4.5MB
- 200 sheet paper capacity
- 300 dpi resolution • 5PPM

### KX-P2123

Quiet 24-pin  
Color Capable  
43.5 dBA!

**\$235**

### KX-P2180

Quiet 9-pin  
Color Capable  
45 dBA

**\$165**

Color Option.....\$49

|          |                               |       |
|----------|-------------------------------|-------|
| KX-P2624 | 24-pin, 300cps, Free ATM..... | \$379 |
| KX-P2124 | NEW.....                      | 319   |

### CITIZEN PRINTERS

#### GSX-230

- 24-pin printer
- Up to 270cps, 90cps LQ
- 8 Built-in fonts

**\$239**

#### GSX-240

- 24-pin printer
- Up to 300cps, 99cps LQ
- 13 Built-in fonts, including 2  
scalable

**\$289**

**GSX-145 • 132 column printer \$359**



Perfect for any  
Notebook or  
Laptop!

### Canon Portable Bubble Jet

**BJ-10ex**

**\$249**

- Prints up to 83cps
- Text & graphics up to 360 dpi
- Uses plain paper & transparencies
- 1-year warranty

**BJ-200 Laser Quality...  
At an InkJet Price**

- Prints up to 4ppm
- 7 resident fonts
- 100-page sheet feeder
- Holds up to 10 envelopes

**\$349**



**EVERGREEN COMPUTERS INT. (510) 526-8667**



# Quality Leader in the East Bay

## 5 Year Labor 1 Year Parts Systems Warranty

### MICRONICS

#### 486-33 VESA LOCAL BUS w/FAHRENHEIT 1280 VESA BUS 245MB Hard Disk Super VGA System

- One Additional Available VESA LV Slot
- Built-In VESA Local Bus 2FD/2HD IDE Controller Card
- 8K Internal, 256K External Cache
- 4MB RAM expandable to 64MB on board
- 245MB IDE Hard Drive Fast
- 14" Super VGA color Monitor (Non-Interlaced 1024x768) .28 dp
- Fahrenheit VESA Local Bus (Windows) Accelerator SVGA Card w/1MB VRAM
- 1.2MB & 1.44MB Floppy Drive
- 101-Key Keyboard
- Tower Case w/300W power supply
- 3-Button High Resolution Mouse



**\$1749**

**486-DX2 66MHz System \$1969**

#### VESA LOCAL BUS 486DX/33MHz Orchid Superboard VLB 245MB Super VGA System



- 8K Internal, 256K External cache
- 4MB RAM expandable to 32MB on board
- 245MB 15ms IDE Hard Drive
- 14" Super VGA color monitor (Non-interlaced 1024x768) .28dp
- 1MB Local Bus Fahrenheit™ VLB Display Card
- 2HD/FD Local Bus VESA IDE Controller Card
- 2S,1P,1G ports
- 1.2 and 1.44MB Floppy Drives
- 101-key Keyboard
- Built-in math coprocessor
- Weitek coprocessor socket
- Clock/Calendar w/battery backup
- Vertical case with power supply
- 3-Button High-Resolution Mouse



**\$1489**

**486DX2-66MHz w/256K Cache System \$1695**

#### ECI VESA Local Bus Hi-Performance 245MB Super VGA System

#### V.L.B.

486DX-33 \$1389  
486DX-50 \$1525  
486DX2-66 \$1595

- 8K Internal, 256K external cache
- 4MB RAM expandable to 128MB on board
- 245MB IDE HARD DRIVE
- 14" Super VGA color monitor (Non-Interlaced 1024x768) .28 dp
- 1MB 16bit VGA (1024x768) card (32 Bit VLB)
- 2HD/FD controller w/2S, 1P, 1G ports (32 Bit VLB)
- 1.2MB and 1.44MB floppy drives
- 101 Enhanced keyboard
- Built-in math coprocessor
- Weitek coprocessor socket
- Clock/calendar w/battery backup
- Vertical case with power supply
- 3 Button High-Resolution Mouse

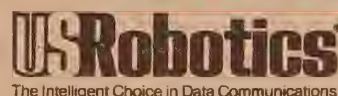


**486-ISA**  
DX-33 \$1349  
DX-50 \$1495  
DX2-66 \$1575

#### OPTIONS:

- 340MB 12ms Hard Disk **ADD \$69**
- 17" Viewsonic 7 Monitor 1280x1024 .28dp **ADD \$605**
- 17" Mitac Monitor NI 1280x1024 .28dp **ADD \$345**

#### FAX/MODEMS



The Intelligent Choice in Data Communications

Sportster 14.4/14.4 MNP5 Int/Ext.....\$165/185  
Sportster 14.4/14.4 Fax for Mac Ext.....\$229

#### INTEL

Satisfaxtion modem (w FAXability s/w)  
-400 Int 14.4/14.4 v.42, v.32bis MNP5.....\$395  
-400e Ext 96/14.4, 4K data buffer.....\$395

#### CONTROLLERS

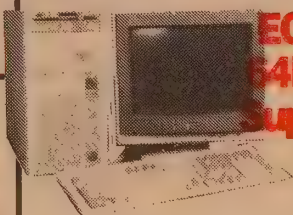
ADAPTEC  
1542C SCSI w. Kit (10MB/s).....\$245  
1742A SCSI EISA /w.Kit (2F & 7H).....\$415  
ULTRASTOR  
ULT 15C IDE Cache.....\$189  
ULT 24F SCSI EISA Cache.....\$369  
ULT34F SCSI-2 VLB 32K.....\$275

#### INTERFACE CARDS

AT I/O card 2S/1P/G.....\$15  
Mono graphic/printer.....\$16  
XT high density floppy cont.....\$35  
Serial/printer/game/clock card.....\$14/14/14/14  
MFM 1:1 HD/FD cont.....\$29  
IDE dual HD/FD cont.....\$14  
IDE w/IO 2S, 1P, 1G, Card.....\$19  
VGA Trident 1024x768 w/1MB.....\$59  
VGA T9000 1024x768 512K.....\$49  
STB 4-COM, 4 serial, 16 bit w/16554 support  
COM 1-8, IRQ 2,3,4,5,10,11,12,15.....\$109

#### ECI 386SX-33 120MB Super VGA System \$799

- 2MB RAM expandable to 16MB
- 120MB HARD DRIVE
- 14" Super VGA Color Monitor (1024x768) .28dp
- 512K 16bit SVGA (1024x768) Card
- Math Coprocessor Socket
- 1.2MB and 1.44MB floppy drive
- 2HD/2FD Controller w/2S, 1P, 1G ports
- 101 Enhanced Keyboard
- Mini Vertical case with 200W power supply



#### ECI 386DX/40MHz 64K Cache 120MB Super VGA System \$949

- 64K cache on board
- 4MB RAM expandable to 32MB on board
- 120MB IDE HARD DRIVE
- 14" Super VGA color monitor (1024x768) .28dp
- 1MB 16bit SVGA (1024x768) card
- 2HD/FD controller
- 1.2MB and 1.44MB floppy drive
- 2 Serial, 1 Parallel, 1 Game Ports
- 101 Enhanced keyboard
- Weitek coprocessor socket
- Clock/calendar w/battery backup
- Includes shadow ram for fast bios access
- Mini Vertical case with 200W power supply

#### COLORADO MEMORY SYSTEMS INC.

DJ-10 (120MB) QIC-49.....\$138  
DJ-20 (250MB) QIC-80.....\$169  
AB-11 External tape port.....\$45  
FC-10 Controller.....\$89  
KE-10 Ext Kit.....\$99  
TC-15 Controller w/data compression.....\$185

**Trakker™** 120Mb External \$279  
Parallel Printer Port 250Mb External \$349  
External Tape Backup System

#### NETWORK CARDS

3COM Etherlink III Coax/TP.....\$139/139  
SMC Ethercard Elite 16 Coax/TP.....\$139/139  
INTEL Ether Express 16 Coax/TP.....\$129/129

### MICRONICS

#### MICRONICS MOTHERBOARD

486DX-33 Local Bus 256K Cache No CPU.....\$359  
486DX2-50/66 Local Bus 256K Cache & CPU.....\$699/819

#### ORCHID MOTHERBOARD

Superboard 486 VLB Local Bus 256K Cache for DX-33, DX2-50, DX2-66 No CPU.....\$169

#### ECI MOTHERBOARDS

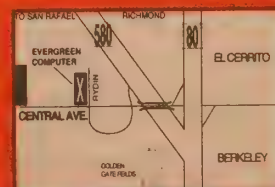
486DX2-66 256K Cache w/CPU ISA.....\$579  
486DX-50 256K Cache w/CPU ISA.....\$525  
486DX-33 256K Cache w/CPU ISA.....\$389  
486DX-33 256K Cache No CPU ISA.....\$119  
386DX-40 64K Cache w/CPU.....\$149  
386SX-33 w/CPU.....\$95  
486DX-33 DX2-50 DX2-66 256K Cache VESA Local Bus No CPU.....\$149

COMPUTER INTERNATIONAL, INC.

2700 Rydin Road #C, Richmond, CA 94804

**EVERGREEN**

(510) 526-8667 FAX (510) 526-1447





# Best Price On CD-ROM & Multimedia

## East Bay Multimedia Leader!

### CD-ROM/SOUND CARD PACKS

**Starter Pack #1**  
Panasonic 522 AT-Bus 390ms  
Soundblaster Pro Deluxe Soundcard  
Includes Free Encyclopedia CD & other Software

**\$335**

**Pro Pack #2**  
Panasonic 562 AT-Bus 340ms Double Speed!  
Soundblaster Pro 16 ASP Soundcard  
Includes Free Encyclopedia CD & other Software

**\$479**

**Turbo Pack #3**  
TOSHIBA 3401B FAST SCSI 200ms  
Mediavision 16-Bit Pro Soundcard  
Includes Kodak Photo Access CD

**\$575**

### CD SOFTWARE PACKS

#### Children's Pack

Arthur's Teachers Trouble  
Barney Bear goes to School  
Beauty & the Beast  
MacMillan Dictionary  
Mixed up Mother Goose

**\$119**

#### Teenage Pack

Barron's College Handbook  
Brain Drain Games  
Grolier's Ency. MPC  
Reference Library  
US History

**\$129**

#### Education Pack

Carmen San Diego Deluxe  
Dictionary of the Living World  
Jones in the Fast Lane  
MacMillan Dictionary  
Playing w/Languages English

**\$119**

#### Fun Pack #1

Chessmaster 3000 MPC  
King's Quest V  
Space Quest IV  
Stellar Seven  
WingCommander/Ultima VI

**\$115**

#### EDU-Family Pack

Microsoft Works  
Mario is Missing/World Atlas  
Mayo Family Clinic  
National Geographic Mammals  
Reference Library

**\$125**

#### Variety Pack

Colossal Cookbook  
GIFS Galore  
Mirror Mirror Games  
Complete Bookshop  
Our Solar System

**\$109**

#### Today's Business Pack

American Business Phonebook  
Font Master Vol. 11  
Kodak Photo Access CD  
Lotus 1-2-3 for Windows MPC  
Microsoft Works for Windows

**\$199**

#### Adult Pack

Asian Ladies  
Animated Fantasies  
Physical Therapy  
Hot Pix Ecstasy  
"For Mature Adults"

**\$135**

### MULTIMEDIA UPGRADE KITS

#### Family Upgrade Kit

Panasonic 522 AT-BUS CD-ROM  
Soundblaster Pro Deluxe  
Stereo Speakers  
Carmen San Diego Deluxe  
Grolier's Encyclopedia MPC  
Microsoft Bookshelf  
San Diego Zoo "The Animals"  
World Atlas MPC

**\$439**

#### ECI Upgrade Kit

Mitsumi MPC AT-BUS CD-ROM  
Soundblaster Pro II  
Stereo Speakers  
Microsoft Bookshelf  
Microsoft Works for Windows  
Creative Sounds  
Sherlock Holmes  
Authorware Star, Temptra & Action!

**\$459**

#### Publishers' Upgrade Kit

Panasonic 562 AT-BUS CD-ROM  
"340MS Double Speed Photo-ready!"  
Soundblaster Pro II & Speakers  
Publish It! 2.0  
Microsoft Works MPC  
Clipart Heaven  
Font Master Vol.1  
Kodak Photo Access CD

**\$509**

#### Performance Upgrade Kit

Toshiba 3401 Fast SCSI CD-ROM  
"200MS Double Speed Photo-ready"  
Mediavision Pro 16-Bit  
Amplified Stereo Speakers  
Compton's Encyclopedia MPC  
Kodak Photo Access CD  
Carmen Sandiego Deluxe Version  
Microsoft Bookshelf

**\$685**

### CD-ROM Drives

• **Panasonic (Matsushita) 522**  
(AT BUS w/Controller Card)  
380ms Access Time, 150KB Transfer Rate, Free Caddy

**Internal Drive .....\$195**

• **Panasonic 562 (Matsushita) AT**  
320ms Access Time, 300KB Transfer Rate, Photo-CD  
Compatible, Free Caddy

**Internal Drive .....\$230**

**External Kit For  
Panasonic 522/532/562 ...\$60**

• **Mitsumi MPC CD-ROM**  
(AT BUS w/Controller Card)  
350ms Access Time, 150KB Transfer Rate, Photo-CD  
Compatible, Caddyless

**Internal Drive .....\$170**

• **TEXEL DM-3024N SCSI**  
265ms Access Time, Multi-Spin, Photo-CD Compatible, Free Caddy

**Internal Drive .....\$359**

**External Drive .....\$455**

• **NEC CDR84-1 CD ROM**  
280ms Access Time, 300KB Transfer Rate, 256K Buffer,  
Supports Multisession Photo CD, SCSI/SCSI II Selectable

**Internal Drive .....\$410**

**External Drive .....\$529**

• **TOSHIBA XM-3401 SCSI**  
Fastest CD-ROM, 200ms Access Time, 300KB Transfer, Multi-Spin, Free Caddy

**Internal Drive .....\$389**

**External Drive .....\$525**

• **Trantor Interface Kit .....\$79**

• **Audio Cables .....\$6.50**

### PRO AUDIO SPECTRUM 16

• True Stereo Sound  
• Advance 20 Voice Stereo Synthesizer  
• MIDI Interface

**\$145**

### PRO AUDIO STUDIO 16

• Above with Voice Recognition  
• Microphone & Software

**\$189**

### SOUND MAN 16

Advanced 20 Voice Stereo Synthesizer  
16-Bit

**\$109**

### CD-ROM SOFTWARE TITLES

| NO. | DESCRIPTION                          | PRICE | 466 | Game Pak 2 (10 Games).....         | 34 | 505 | Peter & The Wolf .....              | 24 |
|-----|--------------------------------------|-------|-----|------------------------------------|----|-----|-------------------------------------|----|
| 474 | Arcade Battle.....                   | 24    | 491 | Great Cities Vol. 1 .....          | 28 | 463 | Playing w/Languages - English.....  | 29 |
| 475 | Adventures of Willy Beamish.....     | 24    | 492 | Great Cities Vol. 2 .....          | 28 | 506 | Playing w/Languages - French.....   | 29 |
| 476 | American Business Phonebook '92..... | 24    | 493 | Guinness Disk MPC 1993.....        | 28 | 507 | Playing w/Languages - German.....   | 29 |
| 477 | Arthur's Teacher Trouble.....        | 29    | 494 | Guinness Disk /Recor. MPC.....     | 28 | 508 | Playing w/Languages - Spanish.....  | 29 |
| 478 | Beauty & The Beast .....             | 24    | 495 | Artis Jeta & Props 2 Disks.....    | 28 | 509 | Publish It! 2.0 .....               | 24 |
| 464 | Battle Chess .....                   | 26    | 496 | Jones in the Fast Lane .....       | 24 | 510 | STW Grolier's Ency. MPC.....        | 49 |
| 479 | Bus. & Econ. World Atlas .....       | 32    | 467 | KingQuest V .....                  | 26 | 511 | San Diego Zoo /Animals .....        | 28 |
| 480 | Business Master .....                | 28    | 497 | Library of the Future 1st .....    | 48 | 512 | Sherlock /Consulting Detective..... | 32 |
| 469 | Carmen San Diego Deluxe .....        | 29    | 470 | Loom .....                         | 24 | 513 | So Much Shareware II .....          | 28 |
| 481 | Chess Master 3000 MPC.....           | 24    | 498 | Media Clips 4 Pack .....           | 59 | 471 | Space Quest IV .....                | 24 |
| 482 | Compton MPC Encyclopedia .....       | 95    | 499 | MacMillan Dictionary .....         | 29 | 472 | Stellar 7 .....                     | 24 |
| 483 | Composer's Quest .....               | 32    | 468 | Microsoft Bookshelf.....           | 45 | 514 | Seventh Guest.....                  | 69 |
| 484 | Desert Storm .....                   | 28    | 501 | Mixed Up Mother Goose.....         | 24 | 473 | Secret Weapons of Luftwaffe.....    | 28 |
| 485 | Dictionary/Living World.....         | 32    | 502 | Musical Instruments.....           | 69 | 515 | Time Almanac 1991.....              | 32 |
| 486 | Electronic Library of Art VI .....   | 32    | 461 | Monkey Island - English .....      | 26 | 516 | Time Table of History.....          | 28 |
| 487 | Family Choice.....                   | 28    | 462 | Nat'l Geographic Mammals .....     | 28 | 517 | U.S. History .....                  | 24 |
| 488 | Family Doctor.....                   | 28    | 503 | Ocean Digital Imagery Vol. 1 ..... | 35 |     |                                     |    |
| 465 | Family Education Collection.....     | 29    | 504 | PC Sig II .....                    | 29 |     |                                     |    |
| 489 | Game Master .....                    | 24    |     |                                    |    |     |                                     |    |
| 490 | Game Pak 1 (5 Games).....            | 28    |     |                                    |    |     |                                     |    |

COMPUTER INTERNATIONAL, INC.

2700 Rydin Road #C, Richmond, CA 94804

(510) 526-8667 FAX (510) 526-1447



EVERGREEN



## Calendar Of Events continued

(415)974-7206.

**October 7 & 14 & 21 Intro To MIDI And The Electronic Music Studio Class.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**October 7-November 4 Case Studies In Multimedia Design Lecture.** San Francisco. SF State Extension Call: (415)904-7700.

**October 7-21 Quark XPress Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**October 7-November 11 Introduction To Interface Design Class.** San Francisco. SF State Extension. Call: (415)904-7700.

**October 8 CNExelerator Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 8 Increasing Productivity for Legal Professionals Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**October 8 Intro To Mac Networks Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 8 Introduction To Computers Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 8 Powerpoint For PC Class.** Pleasant Hill. ACTech. Call: (510)685-6327.

**October 8 Using Laptops For Professionals Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**October 8 Windows 3.1 Beginners Seminar.** Emeryville. Informational Data Networks. Call: 1-800-696-5267.

**October 9 Excel On PC/Mac Class.** San Jose. InfoMind. Call: (408)243-1121.

**October 9 MS For Dos Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 9-10 Intro To The PC For CAD Class.** San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

**October 9-10 Production Management For Multimedia Lecture.** San Francisco. SF State Extension. Call: (415)904-7700.

**October 9 & 16 PC Troubleshooting & Repair Seminar.** Oakland. Excel Micro Solutions. Call: (510)836-2040.

**October 9 & 16 & 23 Hands-On Multimedia Design And Integration Class.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**October 9-18 Multimedia Design And Production Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**October 10 Introduction To Microsoft Project Workshop.** Hayward. Hayward State University Extension. Call: (510)881-3605.

**October 10 Lotus On DOS For Windows Class.** San Jose. InfoMind. Call: (408)243-1121.

**October 11 Beginning Excel Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 11 Digital Video And The Interac-**

**tive Movement Artist Workshop.** San Francisco. Zakros InterArts. Call: (510)881-3605.

**October 11 Intro To LANs Class.** Oakland. California Computer Options. Call: (510)444-5700.

**October 11 Microsoft Access, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 11 Microsoft Excel For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 11 Novell Lab Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 11 & 15 Macromedia Director Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 11-November 1 Photoshop 3 And 4 Class.** San Francisco. Center For Electronic Art. Call: (415)956-6500.

**October 12 Advanced Excel Class.** Pleasant Hill. ACTech. Call: (510)685-6327.

**October 12 Beginning Freehand Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 12 Intro To WordPerfect For Windows Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**October 12 Novell Lab Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 12 Quattro Pro For Windows Class.** Oakland. California Computer Options. Call: (510)444-5700.

**October 12 Quattro Pro For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 12 Quicken For Windows Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 12-13 Intro To Windows Class.** San Francisco. SFSU Extended Education. Call: (415)904-7700.

**October 12 & 14 Beginning Excel Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 12 & 14 Beginning Quark XPress Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 12-14 MS For DOS Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 13 Advanced Netware 3.11 (CNE & CNA) Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 13 AutoCAD Information Session Class.** San Francisco. SFSU Extended Education. Call: (415)904-7737 or 904-7738.

**October 13 Beginning Filemaker Pro Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 13 Beginning Lotus For Windows (4.0) Class.** Oakland. California Computer Options. Call: (510)444-5700.

**October 13 Intro To HyperCard Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 13 Intro To Word For Windows Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**October 13 Novell Lab Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 13 PageMaker For Windows, Level I Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 13 Quark For Windows Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 13-December 15 A New Journalism Career, Artitorial Productions Using The PC Lecture.** San Francisco. SF State Extension. Call: (415)904-7700.

**October 14 Advanced Netware 3.11 (CNE & CNA) Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 14 Advanced PageMaker Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 14 Intro To Paradox For DOS Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**October 14 Novell Lab Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 14 Pagemaker Class.** Oakland. Action Computer Training Institute. Call: (510)562-5511.

**October 14 Windows, Level II Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 14 WordPerfect For Windows Macros Class.** Oakland. California Computer Options. Call: (510)444-5700.

**October 14-15 Intermediate Windows Class.** San Francisco. SFSU Extended Education. Call: (415)904-7700.

**October 14-15 Local Area Networks: LAN-tastic To Novell Seminar.** Oakland. Excel Micro Solutions. Call: (510)836-2040.

**October 14-15 Microsoft Access, Level II Class.** San Francisco. Ciber Training Center. Call: (415)974-7206. San Francisco. SF State Extension. Call: (415)904-7700.

**October 15 Advanced Netware 3.11 (CNE & CNA) Class.** Oakland. MIS Services Corp. Call: (510)208-5700.

**October 15 Beginning Word Class.** San Francisco. Ciber Training Center. Call: (415)974-7206.

**October 15 Intro To DOS Class.** Walnut Creek. Computer Education Center. Call: (510)937-2566.

**October 15 Microcomputers and DOS Class.** San Francisco. Network Services Group. Call: 1-800-998-3540.

**October 15 Windows 3.1 Advanced Seminar.** Emeryville. Informational Data Networks. Call: 1-800-696-5267.



# LAPTOPS

continued from page 38

## COMPUTER OF THE MONTH:

### NEC UltraLite Versa Series



#### RESOURCES:

UltraLite Versa Series, \$2659-\$4539  
NEC Technologies, Inc.  
1414 Massachusetts Ave.  
Boxborough, MA 01719-2298  
1-800-632-4636

Usually my look at a new computer each month is devoted to an individual notebook, but this month will be different. NEC's latest release is a series of computers that use the same basic design, but vary in speed, capacity, display, and accessories. The notebook I tested featured a color display powered by a 25MHz, i486SL processor. The driving idea behind NEC's UltraLite Versa series is that each computer can be configured to meet the needs of the user, today, and can be easily upgraded later by the user at any time. All of the modifications can be done without the use of any tools—which means it is really designed to be upgraded by any of us.

This series offers many features to lure users. It is a notebook computer weighing between 6-7lbs., depending upon the configuration you choose. Its dimensions are roughly 11.5" x 9.3" x 2". Within this general description, both 20MHz and 25MHz processors are currently available, and a 33MHz model is due this fall. It also comes standard with 4MB of RAM, which is upgradable to 8MB (\$349) or 12MB (\$699) with the option of 20MB expected in the fourth quarter of the year.

As you might expect, a range of hard disk

capacities is available. The low-end notebook includes an 80MB drive, while the top of the line offers 180MB. These disks are easily removed by the user and replaced with the larger drives. A nice advantage to this design is the ability to transport just the hard drive from location to location. Of course, this really only works if you and/or your business has standardized on NEC UltraLite Versa computers.

Along with the range of choice, NEC also offers you some options. With two PCMCIA slots in these machines you can select a fax/modem—NEC offers three ranging in price from \$349 to \$699—and either a data storage card or an Ethernet network card (\$399).

The UltraLite Versa series is designed around energy efficiency. All of them use 3.3 volt low power consumption processors. NEC has outdone itself with other power efficiency considerations as well. Standby modes are only one of the many power conservation features built into the UltraLite Versa series of computers. The least expensive color model will run for up to 2.2 hours, and the monochrome for 3.8 hours. These time lengths can be doubled with an extra

battery pack (\$199) that fits in the same slot that holds the removable 3.5", 1.44MB floppy drive. This is extremely efficient if you are traveling long distances. Recharge times are as little as 1.4 hours.

The display measures about 9.5" diagonally. It offers crisp and clear images. The color unit I tested was beautiful, showing none of the drawbacks associated with early color portables. NEC uses an active-matrix system to provide the best possible quality. If you need a larger display, however, it is literally a snap to connect to an external monitor. The computer will support a Super VGA monitor.

The keyboard is well designed and has nice action. No matter how nice a keyboard is, I feel portables should have the capability to accept external keyboards. This computer does. Not only will it accept a keyboard, you can also attach a mouse in the provided mouse port. This is the first notebook I have seen that supports both a keyboard and a mouse at the same time. NEC also provides a trackball. It is the best I have tried to date, mostly because the ball is larger than the standard notebook trackballs. I am finally figuring out that the size of the ball determines how convenient it will be to use. The larger the ball, the easier to use. It clips onto the side of the computer and is convenient enough that I don't constantly wish I had a real mouse for pointing.

NEC includes MS-DOS 6.0 and Windows 3.1 pre-installed. The three-year warranty is as good as any in the business. During the first year, you even get courier pickup and delivery and next-business-day repair turnaround in the United States and Canada.

The UltraLite Versa family of computers ranges from a low list price of \$2659 (20MHz, 80MB hard drive, monochrome) to a high of \$4539 (25MHz, 180MB hard drive, color). If you can afford this computer, buy it. At street prices it may not be that much higher than the competition. ■

## PC UPGRADES

### COMPATIBLES AND BRAND NAMES COMPLETE PARTS AND LABOR WARRANTY

286/386 TO 486SX-25 (M/B, CPU & 4MB RAM) .....\$435  
286/386 TO 486DX-33 (M/B, CPU & 4MB RAM) .....650  
• MEMORY • VIDEO • HARD DRIVE • CD-ROM • MULTI-MEDIA UPGRADES

## PC SALES

ALL SYSTEMS INCLUDE: M/B & CPU W/256 CACHE, 4MB RAM, 245MB HD, SVGA CARD & MONITOR, 2 FLOPPIES, MINITOWER, MOUSE, KEYBOARD, DOS, & WINDOWS

486DX2-66VLB/ISA ...\$1655/1630 486DX-50 VLB/ISA ....\$1580/1555  
486DX-33VLB/ISA ..... 1420/1395 486SX-25 VLB/ISA ..... 1210/1185  
486DLC-40 ..... 1225 386DX-40 ..... 1115

## NETWORK SOLUTIONS

• DESIGN • INSTALLATION • TRAINING • SUPPORT



**DEYS ENGINEERING (510) 770-1969**  
44380 S. GRIMMER, FREMONT CA 94538

• ON-SITE  
SERVICE

• 24-HOUR  
TURN-  
AROUND  
AVAILABLE!



# Lowest Price for Brand Name VESA Local Bus

OverDrive P24T Socket Ready 238 Pin ZIF Socket

AIR EISA 486DX2-66 W/ 256K Cache **1170**

OverDrive P24T Socket Ready 238 Pin ZIF Socket

AIR EISA 486DX-50 W/ 256K Cache **1080**

Made in USA, 2 Vesa Local Bus Slot Basic

ORCHID VLB 486DX2-66 256K Cache **930**

Made in USA, 2 Vesa Local Bus Slot Basic

ORCHID VLB 486DX-33 256K Cache **680**

OverDrive P24T Socket Ready 238 Pin ZIF

AIR VLB 486DX2-66 W/ 256K Cache **920**

OverDrive P24T Socket Ready 238 Pin ZIF

AIR VLB 486DX-50 W/ 256K Cache **820**

OverDrive P24T Socket Ready 238 Pin ZIF

AIR VLB 486DX-33 W/ 256K Cache **670**

Firm in USA, 2 Vesa Local Bus Slot Basic

BAY 486DX2-66 W/256K Cache **850**

Firm in USA, 2 Vesa Local Bus Slot Basic

BAY 486DX-33 W/256K Cache **620**

Landmark 64 MHz, Basic System with 1 MB

BAY 386DX-40 W/128K Cache **340**

Landmark 53 MHz, Basic System with 1 MB

BAY 386DX-33 W/128K Cache **320**

Landmark 33 Mhz, Basic system w/ 1MB

BAY 386SX-33 **280**

## BASIC SYSTEM INCLUDE

MotherBoard & CPU

1MB of Memory • 1.2MB or 1.44MB Floppy Drive  
Multi I/O 2s/1p/1g • Desktop or Mini Tower + P.S.  
1:1 2HD / 2FD Controller • 101 Enhanced KeyBoard

\* Please call for updated price for memory and cpu.

## HARD DISKS (CONNER, MAXTOR, QUANTUM)

|                                 |          |
|---------------------------------|----------|
| 40 MB IDE (28ms)                | \$135.00 |
| 100MB IDE (18ms)                | \$150.00 |
| 130 MB IDE (15ms)               | \$165.00 |
| 213 MB IDE (15ms)               | \$215.00 |
| 245 MB IDE (15ms)               | \$240.00 |
| 240 MB IDE Quantum w/256k cache | \$240.00 |
| 340 MB IDE (13ms)               | \$295.00 |
| 520 MB IDE (12ms)               | \$595.00 |

## UNIX-XENIX-NOVELL NETWORK

|                                |             |
|--------------------------------|-------------|
| Novell Network 4.0 5/10 Users  | \$890/2090  |
| Novell Network 4.0 25/50 Users | \$2995/3995 |
| SCO Unix/ Xenix OS (1-2 User)  | \$390.00    |
| SCO Unix/Xenix OS (3 + User)   | \$890/\$620 |
| SCO Unix/xenix Development     | \$890.00    |

## VESA LOCAL BUS PERIPHERALS/ VLB

|                                        |            |
|----------------------------------------|------------|
| AIR SCSI Local Bus SCSI-2 (Bus Master) | \$260.00   |
| Orchid IDE VLB + MULTI I/O             | \$ 75.00   |
| IDE VLB + MULTI I/O for 486dx-50       | \$ 70.00   |
| MICRONICS 486 VLB w/256 33/66 + CPU    | \$890/1170 |
| ORCHID 486 VLB w/256K 33/50 Mhz        | \$175/185  |
| AIR 486 VLB ISA w/256K 33/50Mhz        | \$195.00   |
| AIR 486 VLB EISA w/256K 33/50Mhz       | \$410.00   |
| Dash 486 VLB ISA w/256K 33/50Mhz       | \$150.00   |
| ATI Ultra Pro VLB w/ 2 MB VRAM         | \$330.00   |
| Diamond Stealth-24 VLB S3 SVGA 1MB     | \$155.00   |
| Orchid Fahrenheit VLB 1MB-2MB          | \$150.00   |
| Orchid Celsius VLB w/ 1MB              | \$220.00   |
| ORCHID Weitek P9000 VLB 3MB (Fast)     | \$345.00   |
| Diamond Viper VRAM VLB 2MB             | \$365.00   |

## MONITORS

|                                       |           |
|---------------------------------------|-----------|
| SuperVGA (1024x768,0.39mm)            | \$205     |
| SuperVGA (1024x768,0.28mm) Arche      | \$250     |
| SuperVGA (1024X768, Non-int) Arche    | \$270     |
| NEC 3FGe 15" Flat Screen              | \$585     |
| NEC 4FGe 15" Flat Screen              | \$675     |
| NEC 5FGe 17" Flat Screen              | \$1090    |
| Viewsonic 6E/ 6FS (15")               | \$310/695 |
| Mag 15F 15" 0.28DP (PC Editor Choice) | \$495     |

## PRINTERS

|                       |                    |
|-----------------------|--------------------|
| Panasonic KX-2180     | \$160              |
| Panasonic KX-2123     | \$240              |
| Deskjet 500/500C/550C | \$385/475/689      |
| HP IIP+/IIIP/IV/4L    | \$785/875/1365/685 |

## MISCELLANEOUS

|                                          |           |
|------------------------------------------|-----------|
| Toshiba internal XM-3401B (fast)         | \$410     |
| AIR SCSI Local Bus Controller VLB        | \$260     |
| Microsoft Mouse Serial Ergonomic         | \$70      |
| SCSI Adaptec 1522 HD/FD                  | \$95      |
| SCSI Adaptec 1542C + EZ Software kit     | \$250     |
| 9600B/2400B FAX/ Modem                   | \$60      |
| 14.4 K Modem/FAX v3.2,v.42bis MNP5       | \$160     |
| Network NE2000 (Coaxial/10BaseT)         | \$85/95   |
| Network SMC Etherlink II                 | \$165     |
| Media Vision Multimedia Kit + SCSI CDROM | \$759     |
| Pro Audio Spectrum 16 SCSI interface     | \$138     |
| Tape Back-Up Drive 120/250               | \$145/195 |
| Sound Blaster Pro 16 ASP                 | \$200     |

## ORCHID + AIR + DASH VLB COMPLETED SYSTEMS

ORCHID VLB 486-33  
W/ 256K CACHE  
MED-TOWER SYSTEM

1.2 & 1.44 + Mouse + 4MB + Fahrenheit VLB SVGA + Maxtor 245MB + IDE VLB w/ I/O

**\$1,270**

AIR VLB 486-33  
W/ 256K CACHE  
MED-TOWER SYSTEM

1.2 & 1.44 + Mouse + 4MB + Fahrenheit VLB SVGA + Maxtor 245MB + IDE VLB w/ Multi I/O Card

**\$1,270**

BAY VLB 486-33  
W/ 256K CACHE  
MINI-TOWER SYSTEM

1.2 & 1.44 + Mouse + 4MB + Cirrus Logic VLB SVGA + Maxtor 213MB + IDE VLB w/ Multi I/O Card

**\$1,080**

ORCHID VLB 486-50  
W/ 256K CACHE  
MED-TOWER SYSTEM

**\$1,460**

AIR VLB 486-50  
W/ 256K CACHE  
MED-TOWER SYSTEM

**\$1,460**

BAY VLB 486-50  
W/ 256K CACHE  
MINI-TOWER SYSTEM

**\$1,120**

ORCHID 486DX2-66  
W/ 256K CACHE  
MED-TOWER SYSTEM

**\$1,495**

AIR VLB 486DX2-66  
W/ 256K CACHE  
MED-TOWER SYSTEM

**\$1,495**

BAY VLB 486DX2-66  
w/256K CACHE  
MINI-TOWER SYSTEM

**\$1,280**

# BAYCOMPUTER, INC.



1252 So. Abel Street, • Milpitas, CA 95035  
Tel: (408) 956-8014 • Fax: (408) 956-8013

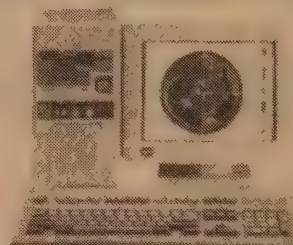


Store Hours: Mon - Fri: 9:30AM - 6:30PM • Sat: 10:00AM - 5:00PM





Assembled In America



### INFINITY-2000™ SUPER BUS SERIES GENOA

- ☐ Vesa Local Bus
- ☐ GENOA 486 MOTHERBOARD
- ☐ PENTIMM OVER DRIVE & ZIP SOCKET
- ☐ Intel 486DX Processor
- ☐ 256K FAST CACHE
- ☐ 4MB RAM Exp. to 32MB
- ☐ Teac 1.2 MB & 1.4 MB Drives
- ☐ IDE Controller 2HD & 2FD w/ 2S, 1P, 1G Port
- ☐ CONNER 250MB 14MS IDEHARD DRIVE
- ☐ GENOA 32 Bit Windows Accelerator VLB w/MB 16.7 million colors
- ☐ 14" Non-Interlaced Super VGA Color Monitor .28
- ☐ Mitsumi 101 Enhanced Key Board
- ☐ Mid. Tower Case w/230 Watts power Supply
- ☐ MS Doc w/manual & Disks

|                     |        |
|---------------------|--------|
| Level III 486DX2-66 | \$1498 |
| Level II 486DX-50   | \$1438 |
| Level I 486DX-33    | \$1298 |

### INFINITY-2000™ MULTIMEDIA PRO SERIES GENOA

- ☐ Vesa Local Bus
- ☐ GENOA 486 MOTHERBOARD
- ☐ PENTIMM OVER DRIVE & ZIP SOCKET
- ☐ Intel 486DX Processor
- ☐ 256K FAST CACHE
- ☐ 4MB RAM Exp. to 32MB
- ☐ Teac 1.2 MB & 1.4 MB Drives
- ☐ IDE Controller 2HD & 2FD w/ 2S, 1P, 1G Port
- ☐ CONNER 250MB 14MS IDEHARD DRIVE
- ☐ GENOA 32 Bit Windows Accelerator VLB w/1MB 16.7 million colors
- ☐ 14" Non-Interlaced Super VGA Color Monitor . 28
- ☐ Mitsumi 101 Enhanced Key Board
- ☐ Mid. Tower Case w/230 Watts power Supply
- ☐ MS Doc w/ manual & Disks.

#### Multimedia Package:

- \* Windows 3.1 w/ manual & disks
- \* Sound Blaster Pro Deluxe
- \* Internal CD ROM
- \* Multi MEDIA ENCYCLOPEDIA CD
- \* Speakers

|                     |        |
|---------------------|--------|
| Media III 486DX2-66 | \$1838 |
| Media II 486DX-50   | \$1778 |
| Media I 486DX-33    | \$1638 |

### INFINITY-2000™ SUPER BUS BASIC SERIES 486 VESA

- ☐ 486 VL BUS MOTHERBOARD
- ☐ 4MB RAM Installed
- ☐ Teac 1.2MB & 1.4MB Drives
- ☐ IDE Controller 2HD & 2FD w/2S, 1P, 16 port
- ☐ CONNER 170MB IDE Hard Drive
- ☐ Windows Accelerator VLB w/1MB (32 Bit)
- ☐ 14" Super VGA Color Monitor
- ☐ Mitsumi 101 Enhance KeyBoard
- ☐ Mid. Tower Case w/ 230 Watts power supply
- ☐ MS Doc w/ Manual & Disks

|                                            |        |
|--------------------------------------------|--------|
| BASIC III 486DX2-66                        | \$1428 |
| BASIC II 486DX-50                          | \$1378 |
| BASIC I 486DX-33                           | \$1228 |
| BASIC SX 486SX-25<br>(No cache memory)     | \$1028 |
| IBM III 486SLC2-66<br>(IBM CPU, 64K cache) | \$1198 |
| IBM II 486SLC2-50<br>(IBM CPU, 64K cache)  | \$1138 |

### INFINITY-2000™ ISA BUS SERIES 486 & 386

- ☐ MOTHERBOARD w/ CPU
- ☐ 128K FastCache
- ☐ 4MB RAM Installed
- ☐ Teac 1.2MB & 1.4MB Drives
- ☐ IDE Controller 2HD & 2FD w/2S, 1P, 1G port
- ☐ CONNER 170MB IDE HARD DRIVE
- ☐ Super VGA Card 1MB (16Bit)
- ☐ 14" Super VGA Color Monitor
- ☐ Mitsumi 101 Keyboard
- ☐ Mini Tower Case w/Power Supply
- ☐ MS Doc w/ Manual & Disks

|                                        |        |
|----------------------------------------|--------|
| INTEL 486DX2 - 66<br>(256K Fast cache) | \$1388 |
| INTEL 486 DX - 50<br>(256K Fast cache) | \$1338 |
| INTEL 486DX -33<br>(256K Fast cache)   | \$1188 |
| CYRIX 486DLC - 40                      | \$ 998 |
| CYRIX 486DLC - 33                      | \$ 968 |
| INTEL 486SX - 25<br>(No cache memory)  | \$ 978 |
| AMD 386DX - 40<br>(512K Video Card)    | \$ 868 |

#### Hard Drive & Floppy Drives

##### Conners

|                           |       |
|---------------------------|-------|
| 170MB IDE 17MS (CP30174E) | \$170 |
| 250MB IDE 14MS (CP30204)  | \$218 |
| 540 MB IDE 12MS (CP3540)  | \$548 |
| 540MB SCSI 12MS (CP3540)  | \$685 |

##### Western Digital

|                                |       |
|--------------------------------|-------|
| 213MB IDE 14MS (CAVIAR WD1210) | \$190 |
| 255MB IDE 13MS (CAVIAR WD2250) | \$235 |
| 340MB IDE 12MS (CAVIAR WD2340) | \$285 |
| 420MB IDE 12MS (CAVIAR WD2420) | \$405 |

##### Maxtors

|                                     |        |
|-------------------------------------|--------|
| 130MB IDE 15MS (MAXTOR 712DA)       | \$160  |
| 540MB IDE 8.5MS (MAXTOR MXT-54DA)   | \$765  |
| 340MB SCSI 14MS (MAXTOR 734SS)      | \$385  |
| 540MB SCSI 8.5MS (MAXTOR MXT-54DS)  | \$765  |
| 1.2GB SCSI 13MS (MAXTOR PD-12S)     | \$895  |
| 1.2GB SCSI 8.5MS (MAXTOR MXT-120DS) | \$1160 |

##### Teac

|                              |       |
|------------------------------|-------|
| 1.2MB FLOPPY DRIVE (TEAC)    | \$45  |
| 1.4MB FLOPPY DRIVE (TEAC)    | \$37  |
| 1.2MB AND 1.4MB COMBO (TEAC) | \$117 |
| OTHER                        | CALL  |

#### Motherboards

##### ISA Bus

|                              |       |
|------------------------------|-------|
| 386SX - 40MHZ w/ CPU         | \$78  |
| 386DX - 40MHZ w/ CPU & 128K  | \$118 |
| 486DLC - 33 MHZ w/CPU & 128K | \$138 |
| 486DLC - 40MHZ w/CPU & 128K  | \$178 |
| 486DX - 33/66 - w/256K       | \$85  |
| 486DX - 50MHZ w/256K         | \$98  |

##### VESA Local Bus

|                                              |        |
|----------------------------------------------|--------|
| 486DX - 50MHZ w/256K                         | \$98   |
| GENOA 486DX VESA w/256K                      | \$128  |
| IBM 486SLC2-50 VESA w/64K                    | \$298  |
| IBM 486SLC2-66 VESA w/64K                    | \$348  |
| 486SX - 25 VESA                              | \$178  |
| ORCHID SUPER BOARD 486DX-33 w/256K           | \$188  |
| ORCHID SUPER-BOARD 486DX2-66 w/256K          | \$198  |
| AMI SUPER VOYAGER 486DX-33 w/256K            | \$CALL |
| AMI SUPER VOYAGER 486DX-50 w/256K            | \$CALL |
| AMI SUPER VOYAGER 486DX2-66 w/256K           | \$CALL |
| AMI ENTERPRISE III EISA VLB 486DX-33 w/256K  | \$CALL |
| AMI ENTERPRISE III EISA VLB 486DX-50 w/256K  | \$CALL |
| AMI ENTERPRISE III EISA VLB 486DX2-66 w/256K | \$CALL |
| OTHER                                        | \$CALL |

#### Monitors

|                                       |        |
|---------------------------------------|--------|
| 14" SUPER VGA MONITOR .39 INTERLACED  | \$195  |
| 14" SUPER VGA MONITOR .28 INTERLACED  | \$235  |
| 14" SUPER VGA MONITOR .28 N.I.        | \$260  |
| 14" VIEWSONIC 6E SVGA .28 NI          | \$295  |
| 14" VIEWSONIC 5E SVGA .28 NI          | \$370  |
| 15" SHAMROCK SVGA MONITOR .28 NI      | \$370  |
| 15" VIEWSONIC 15 SVGA MONITOR .28 NI  | \$540  |
| 15" NEC 3FGE (1024X768) .28 NI (60HZ) | \$595  |
| 15" NEC 4FGE (1024X768) .28 NI (72HZ) | \$695  |
| 15" MAG 15F (1024X768) .28 NI         | \$580  |
| 17" VIEWSONIC 7 (1280X1024) .28 NI    | \$1075 |
| 17" NEC 5FGE (1280X1024) .28 NI       | \$1095 |
| 17" CTX .28 NI                        | \$725  |
| OTHER                                 | \$CALL |
| FULL SIZE TOWER Case w/PS             | \$98   |
| MID. TOWER Case w/PS                  |        |
| MINI TOWER Case w/PS                  |        |
| DESK TOP Case w/PS                    | \$48   |
| OTHER                                 | \$CALL |

#### Video Display Card

|                                        |        |
|----------------------------------------|--------|
| SUPER VGA CARD W/512K                  | \$35   |
| SUPER VGA CARD W/1MB                   | \$48   |
| GENOA 8500 WINDOWS ACCERATOR VLB w/1MB | \$90   |
| GENOA 8600 WINDOWS ACCERATOR VLB w/1MB | \$130  |
| SPIDER WIDOW ACCELERATOR VLB w/1MB     | \$89   |
| SPIDER WIDOW ACCELERATOR VLB w/1MB     | \$118  |
| SPIDER BLACK WIDOW VLB w/1MB           | \$213  |
| SPIDER BLACK WIDOW VLB w/2MB           | \$265  |
| ORCHID FAHRENHEIT 1280 w/1MB           | \$115  |
| ORCHID FAHRENHEIT 1280 VLB w/1MB       | \$145  |
| ORCHID FAHRENHEIT 1280 VLB w/2MB       | \$185  |
| DIAMOND VIPER VLB 3 w/2MB              | \$335  |
| ATI GRAPHIC ULTRA PRO VLB w/2MB        | \$335  |
| OTHER                                  | \$CALL |
| <b>Keyboards</b>                       |        |
| MITSUMI 101 ENHANCED                   | \$18   |
| FUJITSU 101 ENHANCED                   | \$38   |
| FOCUS 2001                             | \$38   |
| FOCUS 9000                             | \$58   |
| OTHER                                  | \$CALL |

**Symphony**

NORTHERN CALIFORNIA BRANCH  
3460 EDWARD AVE.  
SANTA CLARA, CA 95054  
TEL. (408) 980-8325  
FAX. (408) 980-8327

SOUTHERN CALIFORNIA HQ  
9620 E. LAS TUNAS  
TEMPLE CITY, CA 91780  
TEL. (818) 309-9345  
FAX. (818) 309-7579

TWO YEAR WARRANTY ON  
LABOR\* & ONE YEAR ON  
PARTS

- ☐ SUPERIOR QUALITY CONTROL
- ☐ FREE LIFE TIME HARDWARE TECHNICAL SUPPORT
- ☐ FINANCING & LEASING AVAILABLE

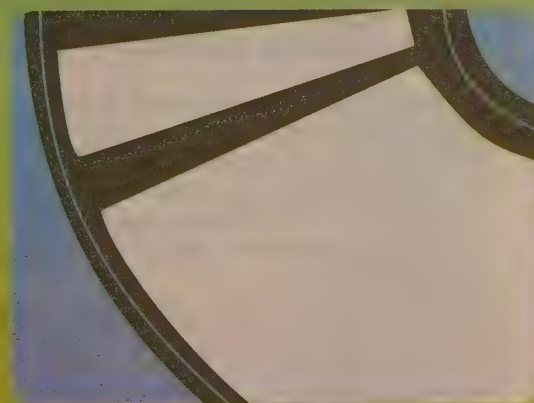
Store Hours: MON. - FRI 9:30AM - 6:30PM, SAT. 11:00AM - 6:00PM

All System's Prices list above are reflect a \$35.00 cash or check discount. Price, terms, availability subject to change w/out notice. Not responsible for typo.



# Multi & Media

Mac Centris;  
Amiga Video Tools;  
Producing Artitorials;  
Computers and Painters;  
Windows Video Cards







**Remember When Learning New Technology Was Easy?**

## With Seybold San Francisco Courses, It Still Is!

### Find out how to do more work in less time and be more creative!

If you're a graphics professional, the pressure to do more work in less time is intense. Seybold San Francisco 93 courses are a quick, convenient way to learn new products and polish your existing skills. These half-day and full-day courses are taught by leading professionals to give you top-quality training in the shortest possible time.

#### Color Fundamentals Series: \$695

##### Color Theory Made Easy: 10/21, \$199

Get a fundamental understanding of color theory for the reproduction process. Study the science of light and color, color perception, communication and the principles of color.

##### Essential Ingredients for Desktop Color Scanning: 10/21, \$199

Calibrate your scanner to the printing conditions, copy characteristics and client's desires of every project to produce optimum color every time. Find out how color scanners work, how they differ, how to make adjustments, compensate for dot gain and achieve gray balance.

##### Color Image Processing & Manipulation: 10/22, \$199

Examine basic methods to process and manipulate images for deficiencies in the reproduction process, correct for inferior quality, achieve editorial and aesthetic requirements and provide special effects.

##### Color Output & Calibration: 10/22, \$199

Become an expert at output calibration to get top-quality, predictable results! Learn how to "close the loop," define dot gain, use a densitometer and more!

### Information packed courses help you sharpen your skills!

##### Photoshop Tips & Tricks: 10/21, \$345 (full day course)

Learn the top ten shortcuts of power users to boost your speed and efficiency. Have fun with filters, algorithmic painting, mezzotints, alpha channels and much more! Plenty of case studies show you how the pros handle real-world applications.

##### Illustration Power Tips: 10/21, \$199

Create effective photo-realistic illustrations from scratch without scanned images. Get the most out of Adobe Illustrator, Fractal Design Painter and Adobe Photoshop. Discover new ways to visualize concepts, "what-ifs" and prepare presentation comps. Increase your productivity and your creative possibilities.

##### Quark Tips, Tricks & XTensions: 10/21, \$199

Tap the secrets of undocumented features! Learn basic and advanced techniques to build your efficiency and productivity. Speed up your troubleshooting, database publishing and color trapping. See lots of QuarkXTensions like Zappers, Son of Bob and CoolBlends to make your system more robust.

##### PostScript Troubleshooting: 10/22, \$199

Blast past PostScript error messages and resolve them quickly. Understand interpreter architecture, job control loops, language concepts, system crashes and error handling to get back on line fast.

##### Desktop Color Trapping: 10/22, \$199

Find out what trapping is and when and where to do it. Discover issues and problems you're sure to encounter and how to resolve them. Survey current application programs for strengths and weaknesses and learn to use them more effectively.

### Learn from the Pros!

##### Case Studies in Design: 10/23, \$199

Top electronic designers and illustrators reveal their secrets for producing award-winning work. Pick up practical design techniques for using software tools that you can put to use immediately.

##### Multimedia Design: 10/23, \$199

Design for the screen with authoring systems, sound resources, digital video integration and image processing. Improve your skills with specific tools and techniques for low-resolution screens, animation, 3D, transitional effects and video.

**Seats fill-up fast,  
ORDER TODAY!**

**Call Seybold NOW at  
1-800-433-5200 Ext. 651**

Other inquiries call 310 457 8597 or fax to 310 457 8599.



Conference + Exposition

October 20-23, 1993 • Moscone Center • San Francisco, CA

Presented by Seybold Seminars



# Multi & Media

b  
e  
y  
o  
n  
d

## Mac Centris: The Flying Workhorse Of Multimedia

### A Visit With Fred Davis

BY TONY REVEAUX

For the full-time, professional multimedia developer, who spends night and day rendering and ray tracing Jurassic-level images, a Mac Quadra is barely enough muscle to get the dinos out the door. But as multimedia becomes more of a mainstream platform, there are more different kinds of users, with a wider variety of needs. Apple's Centris line of microcomputers, especially the 650, is providing a happy medium between low price and high performance.

In the Centris 650, the 32-bit architecture 25MHz processor pushes bits almost three times as fast as a Mac IIci. I've found that a 650 performs Adobe Photoshop, Adobe Premiere, and even Aldus PageMaker tasks swiftly enough that "Waiting" is no longer the dominant refrain. You won't find the instantaneous blur-and-focus performance of an accelerated Quadra, but the 650 moves things along at a pace approaching transparency for most operations. The 650 can also sup-

port high-end peripherals like the SuperMac ProofPositive Printer and the DigiDesign audio boards discussed here by Davis.

The street price for a loaded Centris 650 with 8MB of RAM, 500MB internal hard drive, Ethernet, and a CD-300i internal CD-ROM drive is about \$2650. The current street price for a 610 with 8MB of RAM, 230MB internal hard drive, and a CD-300i internal CD-ROM drive is about \$1980. That CD-300i CD-ROM drive really is one of the best drives out there now—I've found that some CDs that stuttered and hiccupped with other drives run smoothly on the 300i.

#### "SUITE 16": FRED DAVIS'S POWERHOUSE

Power user Fred Davis has been on the forefront of personal computing ever since it's had one. He is the author of the best-selling *Windows 3.1 Bible* from Peachpit Press, and a contributing editor to *Windows Sources* and *Wired*, and cohost

Copyright © 1993 by Tony Reveaux. All rights reserved. Tony Reveaux, a San Francisco-based consultant, is the editor of Computer Publicity News, writes the "MediaScan" column in Film/Tape-World, and is the author of Cool Mac Clip Art Plus! from Hayden. He can be reached via Internet (luna@well.sf.ca.us) or MCIMail 290-3008.

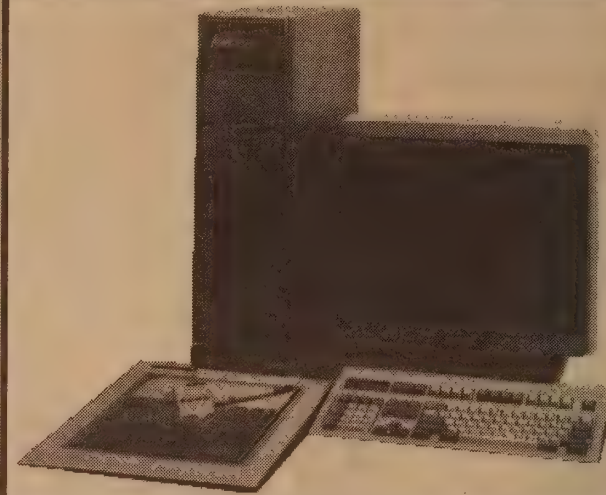


# CAD / MULTIMEDIA

## CAD VL-bus Workstation

- \* 80486 DX2/66 CPU (Upgradable to P24T CPU), 256KB Cache
- \* 16MB Memory (32MB Max.), 1.2 & 1.4MB Floppy drive
- \* 340MB IDE Hard drive (13ms), IDE VL-Bus Controller
- \* Full vertical case, Dual cooling Fan, Heat-Sink
- \* ATI Graphics Ultra Pro VL-Bus Board (1280X1024, 256 Color)
- \* 17" Flat Screen Color Monitor (1280X1024), Calcomp 12X12 Digitizer
- \* 101 Keyboard, 2 serial / 1 Parallel port, MS DOS 6.0
- \* Free S/W & H/W Integration

**\$3,995**



## Drawing Manager

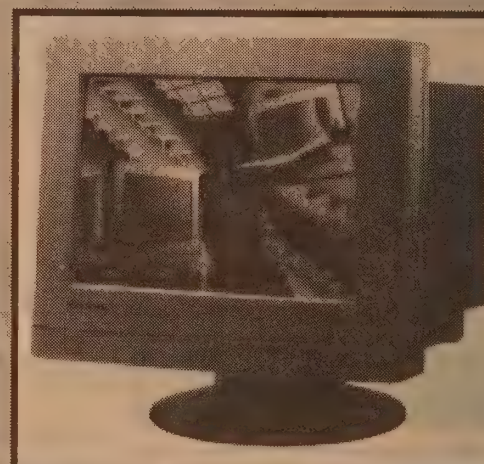
- \* Intel 80486DX/33MHz CPU, 8MB memory, 256KB Cache memory
- \* TEAC 1.2MB & 1.44MB FDD, 245MB IDE HDD, Mouse
- \* 2S / 1P ports, 101 Keyboard, Desktop case, DOS 6.0, Windows 3.1
- \* Large size high resolution scanner (up to E size, up to 600dpi)
- \* 1280X1024 Graphics card (Tracer 1280, Upgradable to 16MB)
- \* Raster background & editing in AutoCAD, Raster to Vector conversion
- \* Complete EDM solutions (Rasterex S/W & H/W Packages)
- \* Large size digitizer (up to 36X44)

**\$Call**

## True Color System

- \* 80486DX2/66 CPU, 256KB Cache, MS DOS 6.0
- \* 2 VL-Bus slots, 3 EISA slots, 3 ISA slots
- \* 16MB RAM (128MB Max.), 340MB IDE Hard drive (13ms)
- \* IDE VL-Bus Controller, Wacom 6 X 9 Pressure Sensitive cordless Digitizer
- \* #9 GXE Level 12 VLB (64K colors at 1024X768, 1.6 mil. colors at 800X600)
- \* ScanMaker II (up to 1200 dpi) 24 bit flatbed color Scanner, PhotoShop LE software
- \* Fargo Thermal Wax color printer. (Letter and A4 size, paper and transparencies)
- \* 17" Trinitron tube color monitor, MS Windows 3.1
- \* Mid. vertical case, 250W P.S. 2 serial / 1 parallel port
- \* Free S/W & H/W Integration

**\$6,595**



## Interactive Multimedia

- \* IBM ValuePoint 486/33 System, 256KB Cache
- \* 8MB RAM (32MB Max.), 240MB IDE Hard drive, 1.44MB Floppy Drive
- \* IBM Mouse, IBM 101 Keyboard, 2 serial / 1 Parallel port
- \* Built-in VGA board (1024X768), Toshiba CD ROM (200ms, 380KB/S)
- \* Media Vision Proaudio 16 sound card, Amplified speaker
- \* Creative Lab Video SPIGOT continuous frame capture board
- \* includes MS Windows 3.1, Video for Windows, Multimedia ToolBook, -MediaBlitz, Asymetrix Make your point, MS DOS 6.0
- \* Free S/W & H/W Integration

**\$3,395**

**IBM**

## Upgrade Your 286/386 to Fast 486 VEISA computer System

- \* 2 Local Bus, 3 EISA, 3 ISA Bus Slots
- \* 256 KB Cache Standard
- \* Up to 128 MB RAM Support
- \* Customize Your System to your needs
- \* Free Technical Support, Backup
- \* Call us for best pricing

**Hercules**



**METHEUS**

**WACOM**

**intel**

**MICROTEK**  
Better Images Through Innovation.



# GRAPHICS / PUBLISHING

## WACOM

### Pressure Sensitive

#### SD-510C(6X9)

- \* With Soft Pressure Sensitive stylus
- \* Ideal for graphic design and handwriting input

\$545

#### SD-420E(12X12)

- \* With Firm Pressure Sensitive stylus
- \* Ideal for CAD, graphic art, desktop publishing

\$695



## TRUEVISION®

A RasterOps Company

### Targa+ / ATVista

#### The Best Multimedia

- \* TARGA+ 16 / 32 / 64
- \* ATVista 1M / 2M / 4M
- \* Bravado
- \* TIPS
- \* Truevision 1024 / 32

\$Call

## matrox

### MG3D / MG3D Ultra

#### MG 3D

- \* 1024 X 768, 4096 Colors, ISA
- \* 3D Dynaview for AutoCAD

#### MG 3D Ultra

- \* 1280 X 1024, 16 million Colors, EISA
- \* 3D Dynaview for AutoCAD

\$Call

## MICROTEK

Better Images Through Innovation.

### ScanMaker

#### ScanMaker II

- \* Flatbed 24 bit color scanner
- \* 1200 dpi resolution

\$895

#### ScanMaker 35t

- \* 24 bit 35mm, film scanner
- \* 3656dpi, 256 gray scale, PhotoStar S/W

\$1,495



## Media Vision

### ProGraphics 1280VLB

#### True Color at 1280X1024

- \* Workstation Performance
- \* Hi refresh rate(1280X1024)
- \* 4MB VRAM Standard
- \* Built-in VGA

\$795

## HOUSTON INSTRUMENT®

A Summagraphics Company

### Ink Jet Plotter (V50)

#### 20X faster

- \* 360X360 dpi A-C size, Inkjet Plotter
- \* Up to 20 time faster than Pen Plotter
- \* HPGL/2, HPGL, Emulates IBM XL24
- \* 1MB Buffer, 2M & 4M(Optional)
- \* Single sheet or rollfeed (Option)

\$1,595

## FARGO

### Primera Color Printer

#### Thermal Wax Printer

- \* 4X faster than Inkjet
- \* Presentations graphics, transparencies
- \* Windows 3.1 Driver
- \* Very low cost to operate
- \* Deliver rich and vibrant Images
- \* Photorealistic Upgrade(\$249)

\$895

## intel®

### Smart Video Recoder

#### Video Capture Board

- \* Captures up to 30 frames per second
- \* Intel i750 Video Processor built in
- \* 2X faster than other Capture Board
- \* Capture, Compress, Store in one step
- \* Asymetrix MediaBlitz and Compel S/W
- \* MS Video for Windows, Intel Software

\$475

### MONITORS

|                                |         |
|--------------------------------|---------|
| * 37" Mitsubishi Scan/Pro      | \$ Call |
| * 33" Mitsubishi Diamond Scan  | \$ Call |
| * 21" NEC 6FG                  | \$2,495 |
| * 21" IDEK 5421A               | \$2,295 |
| * 21" Hitachi Accuview PS21    | \$2,195 |
| * 21" NSA SuperScan Pro21      | \$2,095 |
| * 21" Nanao F750i              | \$2,195 |
| * 20" Ikegami CT20A(Trinitron) | \$1,995 |
| * 20" Ikegami CN20A            | \$1,495 |
| * 20" Seiko 2070LR             | \$2,195 |
| * 20" Nanao T660i              | \$2,495 |
| * 20" SONY 2038                | \$2,295 |
| * 20" Mitsubishi DiamondPro20  | \$2,195 |
| * 20" NSA SuperScan 20S        | \$1,395 |
| * 20" Sampo AlphaScan          | \$1,095 |
| * 17" Mag                      | \$1,095 |
| * 17" NEC 5FG                  | \$1,495 |
| * 17" Nanao T560i              | \$1,895 |
| * 17" Nanao F550i              | \$1,145 |
| * 17" Mitsubishi Diamond Pro17 | \$1,095 |
| * 17" Sony 1730S               | \$1,095 |
| * 17" NSA SuperScan17          | \$ 995  |
| * 14" Sampo AlphaScan          | \$ 395  |

### GRAPHICS CARD

|                              |                 |
|------------------------------|-----------------|
| * RASTEREX Tracer 1280       | \$2,695         |
| * SPEA 1280                  | \$1,695         |
| * #9GXI TC L29               | \$1,495         |
| * #9GXI L23 / 25             | \$1,095 / 1,395 |
| * #9GXE L11 / 12             | \$ 395 / 445    |
| * Artist XJS 12-16           | \$2,195         |
| * Artist XJ1000              | \$1,195         |
| * Artist Winsprint 1000      | \$1,135         |
| * Hercules Graphite          | \$ 345          |
| * Metheus 1104+16/256        | \$995/1,095     |
| * Metheus Premiere 1M/2M     | \$375/575       |
| * Matrox 3D Ultra            | \$ Call         |
| * Matrox MGA 2M/3M           | \$695/995       |
| * Matrox Impression AT       | \$1,395         |
| * MediaVision ProGraphics    | \$ 845          |
| * Vermont X/Series 16/256    | \$1595/1795     |
| * Vermont Cobra Elite        | \$ 995          |
| * Super Mac Spectrum 24      | \$ 945          |
| * Diamond VIPER VLB 2MB      | \$ 445          |
| * ATI Graphics Ultra Pro 2MB | \$ 450          |
| * ATI Graphics Ultra + 2MB   | \$ 350          |
| * TrueVision 1024/32         | \$1,595         |
| * TrueVision 1024XP/24       | \$1,295         |

### PLOTTERS

|                              |         |
|------------------------------|---------|
| * Calcomp 2036 (A-E)         | \$4,095 |
| * Calcomp 2024 (A-D)         | \$3,195 |
| * HP DesignJet (A-E) 600 dpi | \$6,595 |
| * HP DesignJet (A-D) 600 dpi | \$5,495 |
| * HP DesignJet 650C(A-D)     | \$7,095 |
| * HP DesignJet 650C (A-E)    | \$8,495 |
| * HP 7599B (A-E)             | \$7,695 |
| * HP 7596C (A-E)             | \$6,695 |
| * HP 7595C (A-E)             | \$5,295 |
| * HP DraftPro + (A-E)        | \$4,195 |
| * HP DraftPro + (A-D)        | \$3,195 |
| * HP 7475A (A-B)             | \$1,495 |
| * H.I.DMP 162R (A-E)         | \$4,385 |
| * H.I. HIPLLOT 7100 (A-D)    | \$2,795 |
| * H.I. HIPLLOT 7200 (A-E)    | \$3,495 |
| * H.I. JetPro (A-C) V 50     | \$1,595 |
| * H.I. JetPro (A-C) V100     | \$2,495 |
| * Enter SP600 (A-B)          | \$ 695  |
| * Mutoh XP-511 (A-D)         | \$ Call |
| * Roland GRX350 (A-D)        | \$3,495 |
| * JDL 850XP-1M (A-C)         | \$2,895 |
| * AMT Accel244 (A-C)         | \$ 895  |
| * PacificData InkJet (A-C)   | \$1,195 |

### DIGITIZERS

|                        |         |
|------------------------|---------|
| * Calcomp 44 X 60      | \$1,895 |
| * Calcomp 36 X 48      | \$1,695 |
| * Calcomp 18 X 24      | \$1,295 |
| * Calcomp 12 X 18      | \$ 645  |
| * Calcomp 12 X 12      | \$ 289  |
| * Calcomp 6 X 9(P.Sen) | \$ 350  |
| * Summa S. MG2 36 X 48 | \$2,995 |
| * Summa S. MG2 24 X 36 | \$2,595 |
| * Summa S. MG2 17 X 24 | \$2,195 |
| * Summa S. III 12 X 18 | \$ 595  |
| * Summa S. III 12 X 12 | \$ 315  |
| * Kurta XGT 12X12      | \$ 645  |
| * Kurta IS/ONE 12X12   | \$ 345  |
| * Kurta IS/ONE 12X17   | \$ 595  |
| * WACOM 6X9(P.Sen)     | \$ 545  |
| * WACOM 12 X 12(P.Sen) | \$ 695  |
| * WACOM 12X18          | \$1,195 |

### COLOR PRINTERS

|                              |         |
|------------------------------|---------|
| * Seiko ColorPoint PSX       | \$4,995 |
| * Seiko ColorPoint PSE       | \$2,595 |
| * Mitsubishi S3410 (DyeSub)  | \$6,995 |
| * Fargo Primera(Thermal Wax) | \$ 895  |

## JEMINI

### ELECTRONICS

The house of CAD & Graphics Equipment

Mon - Fri : 8-6 Sat : 10-4

3448 De La Cruz Blvd., Santa Clara, CA 95054

Phone (408)727-9986 Fax (408)727-7687

- \* Price reflects 3% cash discount
- \* Price subject to change without notice
- \* Not responsible for typographical errors
- \* All trademarks belong to their respective companies

|               |            |         |
|---------------|------------|---------|
| Montague Exp. | Aldo       | Trimble |
|               |            |         |
|               | De La Cruz |         |
| N.            | 101        | S.      |

Free Technical Support.

New Low Price!

Please call for other products

## NANA O®

## CalComp

A Lockheed Company

## RASTEREX



## HEWLETT PACKARD





# KONICOM

**1510 NORIEGA STREET  
SAN FRANCISCO, CA 94122**

**TEL : (415) 664-3268 FAX : (415) 664-0883**

**NOTEBOOK Special**  
486SLC-33 Processor  
4MB Upgradable to 8MB  
80MB HD / 120MB HD  
\$1549 / \$1625

| Computer Cases / PS          |       | Monitors / Video Cards |        | Hard Drives / Floppy Drives        |       |
|------------------------------|-------|------------------------|--------|------------------------------------|-------|
| Mini Tower Case / PS         | \$50  | Arche SVGA (0.39)      | \$195  | Conner CP30104-120MB - 16ms        | \$169 |
| Medium Tower Case / PS       | \$69  | Arche SVGA (0.28)      | \$225  | Conner CP30174-170MB - 17ms        | \$179 |
| Full Tower Case / PS         | \$69  | Arche SVGA (0.28) NI   | \$249  | Conner CP30204-212MB - 12ms        | \$215 |
| Deluxe Baby AT Case / PS     | \$65  | Arche SVGA 15"         | \$359  | Conner CP30254-250MB - 14ms        | \$219 |
| Slim Power Supply 230W       | \$39  | SVGA (1024X768) 0.28   | \$329  | Conner CP30344-345MB - 14ms        | \$349 |
| AT Power Supply 230W         | \$45  | SVGA (1024X768) NI     | \$249  | Conner CP30544-540MB - 12ms        | \$550 |
| Full Tower Power Supply      | \$49  | Mag Innovation MX115F  | \$510  | Maxtor 7131AT - 130MB 15ms         | \$169 |
| <b>Keyboards</b>             |       | Mag Innovation MX117F  | \$915  | Maxtor 7213AT - 212MB - 15ms       | \$215 |
| 101 Enhanced Keyboard        | \$19  | NEC 3FGe - 15"         | \$579  | Maxtor 7245AT - 245MB - 15ms       | \$239 |
| 101 Key Click Keyboard       | \$25  | NEC 4FGe - 15"         | \$679  | Maxtor 7445AT - 340MB - 13ms       | \$299 |
| Mitsumi Keyboard             | \$25  | NEC 5FGe - 17"         | \$1070 | Maxtor MX17540 - 535MB - 10ms      | \$750 |
| Maximus Keyboard             | \$33  | NEC 5FGe - 17"         | \$1299 | Quantum LP5240 - 245MB - 14ms      | \$239 |
| Keytronics Keyboard          | \$38  | NEC 6FGe - 21"         | \$2275 | Quantum LP525AT 525MB 12ms         | \$575 |
| <b>Modems</b>                |       | Sony CPD 1430 - 14"    | \$575  | Western Digital 2200 - 212MB 14ms  | \$199 |
| GVC 14,400 F/D (16550)       | \$159 | Sony CPD 1730 - 17"    | \$969  | Western Digital 2250 - 250MB 14ms  | \$219 |
| GVC 14,400 F/D External      | \$179 | Sony GDM 2036S - 20"   | \$1925 | Western Digital 2340 - 340MB 13ms  | \$288 |
| GVC 2400 Internal            | \$30  | Sony GDM 2038 - 20"    | \$2199 | Western Digital 2420 - 425MB-12ms  | \$388 |
| Smartlink 9600/2400 Internal | \$49  | Hitachi CM2095 - 20"   | \$1299 | Toshiba 1.2GB 12ms                 | \$929 |
| Smartlink 14,400 Fax/Data    | \$149 | Hitachi CM2087MU - 20" | \$1599 | Teac 1.2MB Floppy Drive            | \$50  |
| Zoltrix 2400 Internal        | \$30  | Hitachi CM2187MU - 21" | \$1899 | Teac 1.44MB Floppy Drive           | \$49  |
| Zoltrix 9600/2400 F/D        | \$55  | Hitachi CM1785MU - 17" | \$899  | Chicon 1.2MB Floppy Drive          | \$48  |
| Zoltrix 14,400 Internal F/D  | \$139 | Nano F340W - 15"       | \$699  | Chicon 1.44MB Floppy Drive         | \$48  |
| Zoltrix 14,400 External F/D  | \$179 | Nano F550W - 17"       | \$1025 | <b>Sound Cards</b>                 |       |
| <b>Tape BU / Controllers</b> |       | Nano F550W - 17"       | \$1080 | Creative Labs Sound Blaster Pro    | \$95  |
| Archive 250MB / Free Tape    | \$168 | Nano T560I - 17"       | \$1699 | Creative Labs Sound Blaster 16     | \$159 |
| Colorado 250MB / Tape        | \$185 | Nano T660I - 20"       | \$2495 | Creative Labs Sound Blaster 16 ASP | \$195 |
| IDE 2HD / 2FD with I/O       | \$14  | Nano F750I - 21"       | \$1975 | Creative Labs Video Blaster        | \$329 |
| Promise VESA IDE I/O         | \$39  | Nano F760W - 21"       | \$1999 | Zoltrix Audio Plus                 | \$39  |
| Adaptec 1522 SCSI            | \$95  | Nano 6500 - 21" Mono   | \$1225 | Media Vision Pro Audio Spectrum 16 | \$135 |
| Adaptec 1542 SCSI            | \$195 | ADI 4G - 15"           | \$415  | <b>Motherboard with CPU</b>        |       |
| <b>Miscellaneous</b>         |       | ADI 3G - 14"           | \$345  | BIOSTAR 386SX-33 AMD               | \$85  |
| 3 1/2" High Density Floppies | \$55  | Vewsonic               | \$345  | BIOSTAR 386DX-40 AMD / 128K        | \$129 |
| 3 1/2" Low Density Floppies  | \$19  | VGA 256K - 16 BIT      | \$35   | BIOSTAR 486DL-33 Cx/128K           | \$149 |
| 3M DC-2120 Tape              | \$15  | SVGA 1MB Video Card    | \$55   | BIOSTAR 486DL-33 / Math-Co         | \$199 |
| Labtec Stereo Speakers       | \$15  | Trident 8900C SVGA     | \$59   | BIOSTAR 486DL-40 Cx/128K           | \$175 |
| Magnetic Shielded Speakers   | \$10  | VESA Cirrus Logic SVGA | \$88   | BIOSTAR 486DL-40 / Math-Co         | \$189 |
| Quick Shot Joystick          | \$15  | GENOA 8500VL SVGA      | \$105  | BIOSTAR 486SX-25 Intel / 128K      | \$195 |
| Mouse Pad                    | \$2.5 | Orchid Fahrenheit VA   | \$159  | BIOSTAR 486DX-33 Intel / 128K      | \$375 |
| <b>Computer Cables</b>       |       | Orchid Fahrenheit VL   | \$145  | BIOSTAR 486DX-50 Intel / 128K      | \$465 |
| <b>CD-ROM</b>                |       | Orchid Celsius         | \$229  | BIOSTAR 486DX-50 Intel / 128K      | \$525 |
| MITSUMI LU005S - 350ms       | \$179 | Orchid P9000           | \$349  | BIOSTAR 486DX-66 Intel / 128K      | \$565 |
| NEC CDR-84J - 280ms          | \$429 | ATI GU+2M              | \$245  | BIOSTAR 486DX-33VL Intel / 128K    | \$389 |
| Panasonic CD-522 - 385ms     | \$179 | ATI GUPro 2M           | \$359  | BIOSTAR 486DX-50VL Intel / 128K    | \$495 |
| Panasonic CD-562 - 320ms     | \$225 | ATI GUPro VLB          | \$359  | BIOSTAR 486DX-66VL Intel / 128K    | \$595 |
| Sony CDU-31 - 415ms          | \$169 | Diamond Stealth 24     | \$159  | IBM 486SLC2-50MHz / Math-Co        | \$288 |
| Sony CDU-561 - 285ms         | \$369 | Diamond Stealth Pro    | \$259  | IBM 486SLC2-66MHz / Math-Co        | \$299 |
| Teac CD-50 - 265ms           | \$379 | SpeedSTAR PRO          | \$139  | IBM 486SLC2-50 VESA                | \$333 |
| TEXEL DM-3024 - 265ms        | \$349 | SpeedSTAR PRO VLB      | \$139  | IBM 486SLC2-66 VESA                | \$349 |
| Toshiba XM-3401B - 200ms     | \$388 | Diamond Viper VLB      | \$379  | IBM 486SLC2-66 VESA / Math-Co      | \$399 |

**For the BEST Prices and  
the BEST Service in Town**

## Financing Available

**Please Call for more Information**

- Prices subject to change without notice
- Prices advertised reflects Cash Discounts
- Not responsible for typographical errors
- One year parts and 5 Years labor warranty
- All logos or marks are trademarks or registered trademarks of the products with which the marks are associated.

**BUSINESS HOURS:**  
MONDAY-THURSDAY : 9:30AM TO 7PM  
FRIDAY : 9:30 TO 6PM  
SATURDAY : 10AM TO 6PM

## Super Deals

- MiniTower Case / PS
  - Motherboard with CPU
  - 4MB RAM Memory
  - IDE 2HS/2FD Controller
  - Chicon 1.44MB FD
  - Conner 170MB HD - 17ms
  - VGA Video Card - 256K
  - 14" SVGA Monitor (0.39)
  - Enhanced Keyboard
  - MS Compatible Mouse
  - 2 Serial, IPParallel, 1 Game
- 386DX-40 / 128K \$825**  
AMD 386DX-40MHz CPU  
Cyrus 486DL-33 CPU  
**486DL-33/128K \$875**  
Cyrus 486DL-33 CPU Inside  
**486DX-33/128K \$1075**  
Intel 486DX-33 CPU Inside  
**486SLC2-66MHz \$999**  
IBM SLC2-66 with Math-Co  
**486DX2-66/128 \$1288**  
Intel 486DX2-66 CPU Inside

## Multimedia 486-33

- MiniTower Case with 230W PS
- 486DL-33MHz MB / CPU
- 128K Cache Memory
- 4MB RAM Memory (70ns)
- IDE 2HD/2FD Controller
- Chicon 1.2MB & 1.44MB FD
- Conner 170MB HD - 17ms
- Windows Accelerator 1MB
- 14" Super VGA Monitor (0.28)
- Audio Plus (Sound Blaster2.0)
- MITSUMI PhotoCD CD-ROM
- 350ms Access, 150KB/S, Made in Japan
- Magnetic Shielded Speakers
- MIDI, Audio, Microphone Build-in
- Manuals & Software Drivers
- Toolworks CD's Included:
- Groliers Multimedia Encyclopedia
- US Atlas MPC & World Atlas MPC
- Mavis Beacon Typing Tutor MPC
- Chess Master 3000 MPC

**for only \$1188**

## VESA Systems

- MiniTower Case / PS
  - 32 Bit VLB MB with CPU
  - 4MB RAM Memory
  - Promise VESA IDE Ctrl
  - 1.2MB and 1.44MB FD
  - Conner 250MB HD
  - 32Bit SVGA Video - 1M
  - 14" SVGA Monitor (0.28)
  - Enhanced Keyboard
  - MS Compatible Mouse
  - Serial, 1 Parallel & 1 Game
- 486SX-25 / 128K \$1025**  
Intel 486SX-25 CPU Inside  
**486DX-33 / 128K \$1288**  
Intel 486DX-33 CPU Inside  
**486DX2-50 / 128K \$1399**  
Intel 486DX2-50 CPU Inside  
**486DX2-66/128K \$1488**  
Intel 486DX2-66 CPU Inside  
**486SLC2-66MHz \$1299**  
IBM SLC2-66 with Math-Co

## Multimedia

### Starter Kit \$238

- Zoltrix Audio Plus Sound Card
- Sound Blaster 2.0 Compatible
- MITSUMI CD-ROM
- Photo CD Compatible / Multi-Session
- 350ms Access Time / Made in Japan
- Plus 2 Action Games
- Special Bonus Package FREE (Limit to First 50 Customers)
- Ear Plug-In Stereo Headphones
- Quick Shot Joystick
- Willy Beamish (CD Game) or King's Quest V (CD Game) or Mixed-Up Mothergoose (CD Game)

## Multimedia Deluxe

### CD Kit \$333

- Sound Blaster PRO Sound Card
- Panasonic CD-522 CD-ROM
- Photo CD Compatible / 385ms
- Magnetic Shielded Speakers
- Bonus Package:
- Microsoft Bookshelf 1993 - MPC
- King's Quest V by Sierra
- Willy Beamish (Game)
- Mixed-Up Mothergoose or Choose one CD-Package FREE!

## Multimedia 16

### Deluxe Kit \$495

- Pro Audio Spectrum 16
- 16 Bit Stereo Sound Card
- SONY CDU 561 CD-ROM
- Double Speed / XA Multi-Session Photo CD
- 285ms Access Time / 300Kb per Sec.
- Cables & Software Drivers Included
- Magnetic Shielded Speakers
- Bonus: Choice of 1 CD-Title
- Groliers Encyclopedia (CD)
- Mayo Clinic Health Book
- KODAK Photo CD

## SIERRA'S GAME PACK

1. KING'S Quest V
2. Jones In The Fast Lane
3. Adventure of Willy Beamish
4. Stellar 7
5. Space Quest IV

## WINDOWS DELUXE PACK

1. Groliers Encyclopedia by Toolworks
2. United States Atlas by Toolworks
3. World Atlas by Toolworks
4. Mavis Beacon's Typing Tutor
5. Chess Master 3000 - MPC
6. The Animals (San Diego Zoo)

## CHILDREN'S CD-PACK

- Arthur Teacher's Trouble
- Compton's Family Choice
- Mixed Up Mother Goose
- Barney Bear Goes To School

## SUPER VALUE PACK

- Microsoft Bookshelf 1993 MPC
- CMC Family Doctor
- The Animals
- PC-SIG 10th Edition
- Windows Master

## Choose Any of these Packages for

**\$77.77**

While Supply Last!

## CHILDREN'S CD-PACK II

- Carmen San Diego Deluxe
- Peter and The Wolf
- Beauty and the Beast
- Playing ith Languages

## EDUCATION CD-PACK

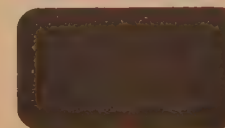
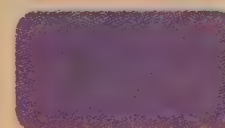
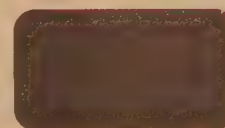
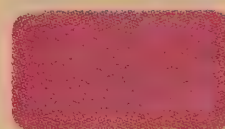
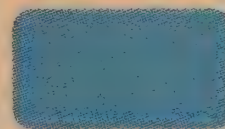
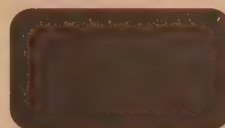
- Microsoft Bookshelf 1993
- Education Master
- US and World Atlas
- Mavis Beacon Typing Tutor
- Chess Master 3000

## ADULT CD-PACK (3)

- Phone Sex or Busty Babes or Smutware or Asian Ladies or Storm 1 or Storm 2 or Storm 3 or Southern Beauties or Hot Pix



# Multimedia beyond



(with Gina Smith) of the nationally syndicated radio show *On Computers*. (In the Bay Area, *On Computers* is heard Sundays 10 am–12 pm on KNBR [680 AM].)

This Windows guru chooses the Macintosh for multimedia. Davis has assembled a dream music/audio system installation in his Berkeley hills home, with the Macintosh Centris 650 at its core.

"I call it my 'Suite Sixteen' system," says Davis, "because I have the Sony 1604 16" monitor, which is able to run directly off the Centris 650 video. Like the Quadra, the Centris has built-in 16-bit video on the motherboard, even for a big screen. I have 16MB of RAM and a 1600MB optical drive that fits right in the drive bay in the Centris.

"With four-track digital audio, you burn up 20MB per minute! After all my software is loaded and everything, I have about an hour and a half of recording time on this drive. But because it's an all-digital system, I can write out sections onto an audio DAT tape in a digital copy, or copy an entire audio CD in a digital image to the hard disk and then reedit it. Or, I can compile enough of my own music to fill an entire CD, master that off to a DAT tape backup, and send it off for CD mastering.

## CENTRIS 650: THE POOR MAN'S QUADRA

"I use Ethernet for my cross-platform activities," said Davis, "like going to the PC. Ethernet is also now built into the motherboard of the Mac, which saves the hassle of getting the card. That's part of the 'Poor Man's Quadra' thing—you have the built-in video and the built-in network.

"Apple has put a lot of stuff into the Centris. Even though it is priced low, it's also a good value, not stripped down like the IIfx. I came from a Mac IIfx with 8MB of RAM, and it was dying under the weight of the music system. And then going up to the Centris 650, with my 'Suite 16' configuration, alleviated all of my problems. Before, everything was freezing up on me, like the DigiDesign ProTools.

"Unlike anything available on the PC, or most other Mac audio cards, ProTools does four tracks of digital audio instead of just two. ProTools is a hardware and software package, but mostly hardware. There's a quantum leap in going from two channels to four channels, which is the ability to mix tracks down without destroying the stereo image. It's an all-digital system without any loss, through repeated redubbings. Another thing it can do is have up to sixty-four vir-



"I have a 486/50 PC, and it's a pretty decent PC. It's equivalent in many ways to a Centris, but it doesn't hold its own against the Centris in terms of the stability of the platform for multimedia. Even though I'm a Windows expert, I could not do what I'm doing today on the PC platform at any price."

tual tracks, of which four can play at one time. When you mix things down, you don't lose those original tracks—they're still there on the hard disk if you want to go back and remix them again. And then there's also the cut and paste capabilities in digital audio."

## DIGITAL CLEANUP WITH DIGIDESIGN

"The newest innovation added to this is DigiDesign's SounDesigner II, which you have to buy on top of the ProTools hardware. ProTools is \$6000; the add-in retails for \$1000, and the software retails for \$795, so you're making a major investment to get up to this point.

"DigiDesign's DINR [DigiDesign Intelligent Noise Reduction] is like Dolby in reverse. You can record a tape, and then strip the hiss and hum off an analog recording. You can use it to restore old sound recordings. The NoNoise system,

which has been used for this kind of application, costs \$100,000. Now you can get its equivalent in software for the Mac.

"I have restored old records. A friend of mine used to be in this band called The Buckingham's in the '50s and the '60s. He was putting together a demo tape and wanted to take one of his Buckingham's songs and have it cleaned up, so he brought it over here.

"DINR is all MIDI and SMPTE-syncable and can write to any time code. It is the high-end desktop digital audio studio. There's nothing else out there right now that beats this in terms of audio quality. It's a one-bit digitizer; its not like a multi-bit sampler.

"Then I have a couple of DAT decks and an Akai sampler with a digital connection to it, and a Quark Wave Station. The Eventide Ultra Harmonizer is a sound processing computer that does every reverb, chorus, special effect, in-studio effect, and sound manipulation. It's an audio special effects generator. I have 128 channels of MIDI capability, as well as the four tracks of digital audio. So it's really like a 132-track recorder."

## STUDIOVISION FROM OPCODE

"I have another program called StudioVision from OpCode. It's the optimum program for integrating MIDI and digital audio, and it works with the DigiDesign hardware. So when I'm editing sounds, I'm usually using SounDesigner; but when I'm mixing down a final musical production I'm using StudioVision.

"The ability to mix MIDI and digital audio is really great, because you don't need that much real, memory-hogging digital audio. Digital audio is best for the things that MIDI can't do, like the human voice, guitar, and saxophone. Other instruments like drums can be done on MIDI. I can put together a symphony orchestra, a jazz band—you name it—all in MIDI, and then just put in all the vocals and the things that you need digital audio for on top of the MIDI. It's way beyond what you can do with a normal tape deck system.

"The cabling for 'Suite 16,'" adds Davis, "takes more than the installation of a LAN [local area network] in an average size office. Ethernet allows the Mac Centris and the PC to share information. Sometimes there are compositional tools in Windows now that aren't available on the Mac just yet, so I can write a MIDI file, test it out on



# Multi & Media

b  
e  
y  
o  
n  
d

## Cool Video Tools

### Amiga-Based Capture, Editing, And More

BY DOUGLAS J. NAKAKIHARA

A lot of people believe that capturing moving video on a desktop PC is a fairly easy thing to do. Just install a video capture board in your PC, connect the thing to your video source, and click the record button. Just like a VCR, right?

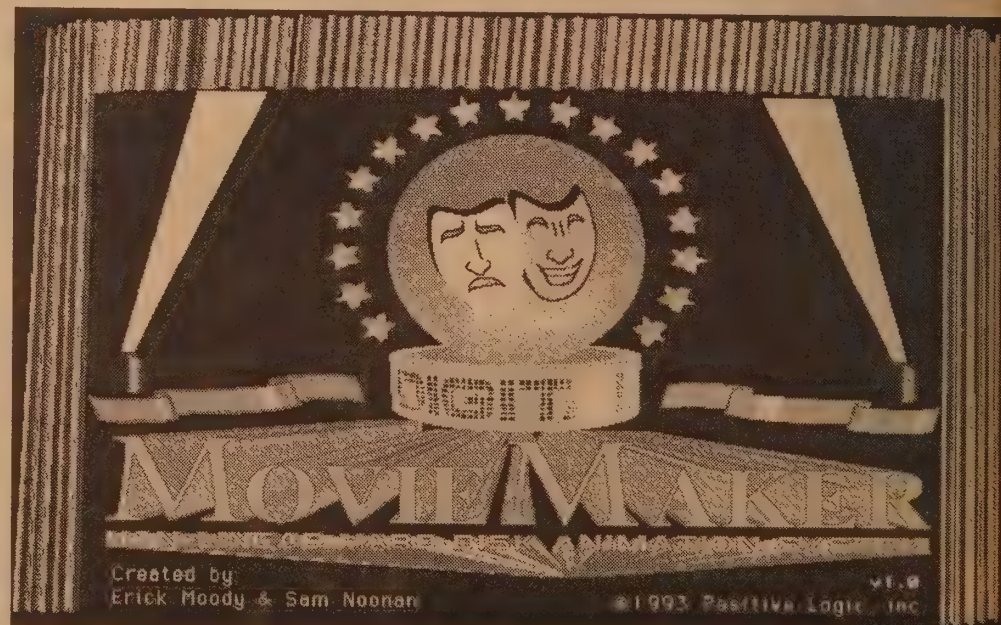
Well, not quite.

The problem lies in data transfer rates. Depending on file format, a single full frame of video is at least one-half megabyte in size. So one second of video, thirty frames, is about 15MB of data.

A PC normally can't transfer that much data to a hard drive that quickly. Saving the

data to RAM is an alternative, but cost-prohibitive for anything more than a few seconds. To compensate, most boards capture less than a full frame of video. Until some sort of hardware compression like JPEG becomes affordable, capturing full-

Copyright © 1993 by  
Douglas J. Nakakihara.  
All rights reserved.





# Multimedia

# Friendly Software Store

|                                                                                                                                                       |                                                                                                                |                                                                                                                                                                   |                                                                                                          |                                                                                                                                 |                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Large Selection</b>                                                                                                                                | <b>Trakker</b><br>Portable 250mb Tape Backup<br>connect to parallel port<br>By Colorado<br>\$349               | <b>486DX2-66 Vesa Local Bus</b><br>- ISA Motherboard and CPU<br>- 32K Cache<br>- 2 Vesa Local bus slot<br>\$659                                                   | <b>ENCARTA</b><br>CD-ROM Multimedia Encyclopedia<br>\$259                                                | <b>PROPHONE</b><br>CDROM PHONE BOOK<br>7 Disk Set, New Mid 1993 Ed.<br>70 million residential<br>10 million business<br>\$119   | <b>ALR Pentium</b><br>VLB, Desktop, 8mb ram<br>No video or Hard disk<br>\$2495                                                                          |
| <b>WatchIT! TV</b><br>By New Media Graphics<br>TV in a window. Includes<br>TV tuner plus image capture<br>\$249                                       | <b>SupraFAX Modem</b><br>14,400 bps Send/Receive<br>Fax/Modem V.32bis V.42bis<br>External No Software<br>\$229 | <b>SupraFAX Modem</b><br>14,400 bps Send/Receive<br>Fax/Modem V.32bis V.42bis<br>Internal with Software<br>\$179                                                  | <b>ALTEC LANSING</b><br>ACS300 Stereo Speakers<br>with separate SubWoofer<br>\$279                       | <b>Smart Label Printer Pro</b><br>By Seiko<br>\$229                                                                             | <b>7th Guest CDROM</b><br>Interactive Movie<br>\$49 <sup>95</sup>                                                                                       |
| <b>FUSION DoubleCD-16</b><br>By Media Vision<br>CD Drive, 16 bit Sound, Speakers<br>Complete Interactive Encyclopedia<br>7th Guest and more.<br>\$610 | <b>PRO 16 MULTIMEDIA SYSTEM<sup>2</sup></b><br>CD-ROM With 16 bit Sound BY Media Vision<br>\$869               | <b>Snap Plus Desktop TV</b><br>By Cardinal<br>VGA plus NTSC in and NTSC out<br>\$769                                                                              | <b>PRO AUDIO STUDIO 16</b><br>VOICE RECOGNITION<br>Plus CD-ROM interface, 16 bit Text to Speech<br>\$219 | <b>ScanMaker II</b><br>By Microtek<br>1200 DPI, 16 Million Color<br>Full page scanner<br>\$869                                  | <b>Thrustmaster Flight Control</b><br>Also Weapons Control<br>Flight Control Pro and<br>Rudder Pedals<br>\$79                                           |
| <b>VIDEO BLASTER</b><br>BY CREATIVE LABS<br>\$349                                                                                                     | <b>SOUND BLASTER 16 ASP</b><br>\$229                                                                           | <b>DISCOVERY CD 8</b><br>By CREATIVE LABS<br>Internal CD-ROM 350mb 64K buffer<br>Stereo Speakers<br>Sound Blaster Pro 8bit<br>Techworks 88K Encyclopedia<br>\$399 | <b>SOUND BLASTER PRO DELUXE</b><br>With CD-ROM interface<br>\$129                                        | <b>VideoSpigot For Windows</b><br>\$419                                                                                         | <b>Corel Draw 3</b><br>\$139                                                                                                                            |
| <b>THE MIRACLE</b><br>Piano teaching system<br>\$299                                                                                                  | <b>Kodak 450GL Digital Color Printer</b><br>4" by 5.5" 16 million color Photo Quality<br>\$1290                | <b>Kodak Diconix 701</b><br>\$299                                                                                                                                 | <b>Mitsumi CD-ROM</b><br>Drive plus Controller<br>360ms Access Time<br>\$199                             | <b>Cakewalk Pro For Windows</b><br>\$199                                                                                        | <b>Pixar Typestry</b><br>Turn TrueType and Type 1 into 3D objects<br>with shadows and textures. Make 3D movies.<br>This program is incredible.<br>\$159 |
| <b>Pioneer 6 CD Changer</b><br>600 KB/Sec. Transfer<br>\$1295                                                                                         | <b>SuperScan 20'</b><br>HITACHI 20" Color Monitor<br>1280 x 1024 Non interlaced<br>\$1329                      | <b>Number Nine 9GXE Level 12 Vesa Local Bus</b><br>\$439                                                                                                          | <b>Playmation</b><br>3D Modeling, Rendering and Animation<br>Create your own Jurassic Park<br>\$339      | <b>Toshiba 3401</b><br>Internal CD-ROM<br>\$469                                                                                 | <b>Windows NT</b><br>Floppy + CDROM<br>Regular 319<br>Upgrade 289                                                                                       |
| <b>Complete Communicator Voice Mail</b><br>\$119                                                                                                      | <b>Canon BJ 200 Bubble Jet</b><br>\$349                                                                        | <b>Scanman 256</b><br>By Logitech<br>With OCR<br>\$229                                                                                                            | <b>Mustek Hand Scanner with OCR</b><br>\$99                                                              | <b>Mustek Color Artist Pro</b><br>\$369                                                                                         | <b>Epson LQ 570+</b><br>24Pin with Scalable Fonts<br>\$259                                                                                              |
| <b>Plus Books and Magazines</b>                                                                                                                       | <b>Turtle Beach MULTISOUND</b><br>\$529                                                                        | <b>Gravis ULTRASOUND</b><br>\$149                                                                                                                                 | <b>Fontographer</b><br>By Altsys<br>For Windows<br>\$269                                                 | <b>10,000</b><br>Products in stock or available next<br>day from local warehouses.<br>We special order every day<br><b>Call</b> | <b>Service</b><br>We service computers<br>and Software<br>in store or On site<br><b>Call</b>                                                            |

**Epson Fractal Logitec Turtle Scanman Pro Audio Labtec Epson CPU Photoshop Adaptec Strike PC Tools Mustek CD**  
**2250 Painter Scanman 16 Tools Color Spectrum Speaker Pak 3250 Fan Windows 1542C Commander Windows OCR Scanner Speedway**  
**\$139 \$269 \$169 \$65 \$579 \$165 \$199 \$189 \$199 \$549 \$275 \$55 \$119 \$99 \$59**

| CD-ROM Software                            | Motherboards                               | Hardware                                     | Networking                                 |
|--------------------------------------------|--------------------------------------------|----------------------------------------------|--------------------------------------------|
| Mayo Clinic Family Health Book..... 69.95  | CLONE MOTHERBOARDS W/CPU                   | Dexa Mouse ..... 19.95                       | WINDOWS For WORKGROUPS                     |
| Sherlock Holmes Consulting 3..... 49.95    | - 386SX-33 Motherboard..... 99             | Color Monitor 1024 x 768 .28dot ..... 266.00 | - 2 user starter kit ..... 589.00          |
| Day of the Tentacle ..... 44.95            | - 386DX-40 128 C..... 159                  | Labtec SS700 Speaker pair..... 29.95         | - 2 user add on starter kit ..... 389.00   |
| Microsoft Dinosaurs ..... 59.95            | - 486DX-33 64C..... 410                    | Thrustmaster Mark 2 Weapons! ..... 99.95     | - 1 user add on kit ..... 299.00           |
| Berlitz Think and Talk Spanish..... 119.00 | - 486DX-50 128C ISA + Local Bus ..... 619  | Future Doman 850 SCSI Control..... 49.95     | - 1 user software (req. win.) ..... 69.00  |
| Women of Venus ..... 29.95                 | - 486DX2/66 256C ISA + Local Bus ..... 659 | Canon BJ200 Inkjet ..... 399.00              | - 1 user with windows ..... 159.00         |
| Comptons Interactive Encycl..... 239.00    | VIDEO CARDS                                | Canon BJ200 Inkjet ..... 349.00              | LANTASTIC                                  |
| PC Karaoke ..... 89.00                     | - Diamond Stealth Pro 2mb ISA..... 339     | Thumbelina mouse ..... 69.95                 | - LanTastic Noderunner 2000/C ..... 179.00 |
| Street Atlas USA, Delorme..... 99.95       | - Diamond Stealth Pro 2mb VLB..... 349     | Mustek PrinScan 105 Laptop scan..... 179.00  | - LanTastic Noderunner 2000/T ..... 185.00 |
| Global Explorer by Delorme..... 99.95      | - Tridand 8900CL 24bit, 1280x1024..... 149 | Colorado 120 mb backup ..... 169.00          | - LanTastic Z ..... 89.00                  |
| Map Expert by Delorme..... 275.00          |                                            | Plus much more .....                         |                                            |

**Friendly Software Store**

17 years

Not responsible for Typographical Errors

376 El Camino Real, San Carlos

**415-593-8275**

Monday thru Friday . 10:00 to 6:30

Saturday ..... 10:00 to 5:00

Sunday ..... 12:00 to 5:00

Prices subject to change without notice



# MultiMedia & beyond

frame video at 30fps appears just a dream for the average desktop videographer.

## THE VLAB

But wait.

MacroSystemUS's VLab card for the Commodore Amiga can do 30fps full-frame video capture. Perhaps even more astonishing: You can even use a cheap consumer-grade VCR as your video source.

VLab accomplishes this amazing feat using its innovative Interleaved Frame

VLab will let you know when a Keyframe, which must precede the start of your scene, is found. (If it isn't, simply start a little farther back on the tape and try again.) As soon as your scene comes up, click on the Start Scene button. Now all you need to do is click the Start button, rewind the tape past the Keyframe, and play the tape again. Each time VLab finishes a pass of capturing frames, you must rewind and play the tape again.

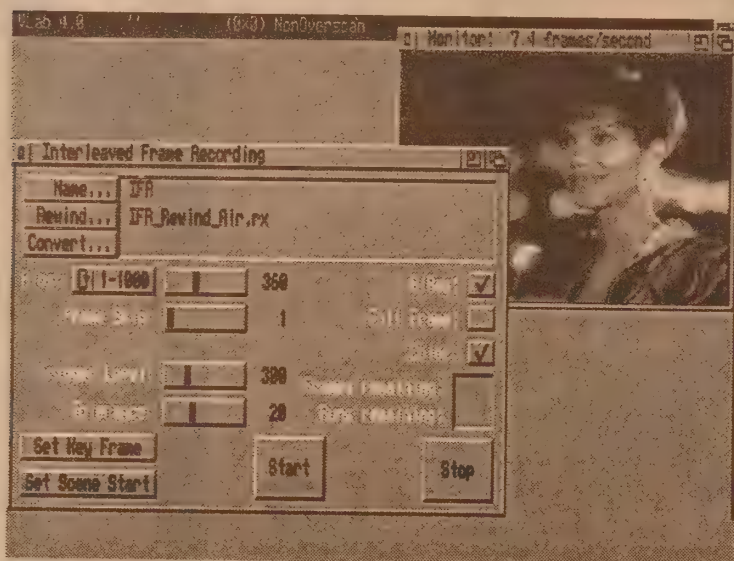
The total number of captured frames is selectable by the user. If you're capturing at 30fps, just multiply the length of your scene in seconds by thirty. To improve capturing speed and decrease storage requirements, you can reduce the capture resolution or capture in black-and-white. When doing IFR, make sure you disable your screen saver as it may throw VLab's timing off and cause the wrong frames

may discourage its use. A more manageable frame rate is 15fps. Obviously, motion will not be as smooth as it is at 30fps, but it's not annoying.

In addition to IFR, VLab will also capture a sequence of frames at up to 6fps, somewhat like making a single IFR pass at a video source. However, the sequence-capture has a little more control over what is captured. A nice feature is that you have the option of using a resolution of one-half, a third, or a quarter of the screen. This can significantly reduce storage requirements. Obviously, VLab won't even break a sweat capturing a single frame of video. Individual frames can be saved in any Amiga format including 24-bit IFF and AGA.

VLab has loads of other features including extensive ARexx support. You can also monitor the incoming video source in greyscale in a movable window. Video played fairly smoothly in this window on my A3000. You can't see much detail, so depending on your needs you might want to use a signal splitter and watch the video source on a separate monitor. Real-time color, contrast, luminance, and gamma controls are included, as well as luminance, chrominance, and noise filters.

VLab fits into any Zorro II/III slot and does not require the video slot. The VLab Y/C version includes two RCA video inputs plus a Y/C connector for Hi-8 and SVHS video sources. Inputs are software selectable. An external version is available for the A500, A600, and A1200.



Recording (IFR) technique. Basically the VLab captures frames as fast as your Amiga can do it. By making multiple passes at the video source (tape or laserdisc), VLab automatically captures more and more frames. For example, on the first pass it might capture frames 1, 16, 31,... The second time around, it might pick up frames 2, 17, 32,... As you can see, ultimately, all thirty frames for each second can be captured! In this example, it would take fifteen passes to capture all of the frames.

The secret to IFR is the selection of a Keyframe, which provides VLab with a point of reference on your video source. Once the Keyframe has been identified, VLab only needs to know how many seconds after the Keyframe it should wait before capturing frames. When VLab is capturing frames, it knows, based on time, which frames it needs to capture—accuracy to a thirtieth of a second is child's play for a computer. A Keyframe seems to occur whenever there is an abrupt change in the video signal—the camera cutting to a different location, or to a close-up of an actor.

The IFR process basically works like this. First you put your VCR in play mode and click on VLab's Find Keyframe button.

to be captured.

There are also provisions for automating the rewinding process. I highly recommend a terrific product called AirLink by Geodesic Designs. This is an inexpensive infrared (IR) universal remote control for the Amiga. Example ARexx scripts to control AirLink are already included with the VLab software. AirLink can automatically rewind your tape past the Keyframe and then put your VCR back into the play mode, at the end of each IFR pass! Essentially, once you've set up the IFR parameters, you can click a button and walk away. AirLink will also work with camcorders, laserdiscs, etc., as long as they can be controlled with an IR remote.

You're going to need a large hard disk to store all of the frames you capture. Although IFR initially saves frames in a compact YUV format, at 30fps, the storage requirements can really add up. I'm hoping that a provision to convert the captured images to a smaller file format after each IFR pass, thus reducing overall storage requirements, will be added in the future.

For the average user, 30fps may be overkill. The storage requirements alone

## WHAT CAN I DO WITH IT?

Applications for the VLab are only limited by your imagination.

For example, most desktop video users are limited to morphing—the current “hot” video effect—one static image to another. With VLab you can now generate the images needed for moving morphs (i.e., the source and target images are moving). Examples of moving morphs can be seen in the movie *Terminator 2* and Michael Jackson's *Black or White* music video.

For the 3-D rendering people, how about the ability to wrap moving video onto your objects! Computer-aided presentations could include video segments without the need for VCRs or laserdiscs. VLab could provide source images for rotoscoping (painting on frames by

## RESOURCES

VLab Y/C, \$599.95

VLab, \$499.95

VLab External, \$549.95

MacroSystemUS  
17019 Smugglers  
Cove

Mt. Clemens, MI  
48038  
(313)263-0095

AirLink, \$50

Geodesic Designs  
PO Box 956068  
Duluth, GA 30136  
(404)822-0566

MovieMaker, \$895

Interactive Video  
Systems  
14804 Beach Blvd.  
La Mirada, CA 90638  
(714)228-2040



# MultiMedia Expo

OCTOBER 12-14, 1993 ♦ SAN JOSE CONVENTION CENTER

## Digital Video Silicon Valley

### ROUNDTABLES

- Digital and Entertainment Alliances  
From Headends to Set-Tops
- Music Video Directors,  
Recording Artists and Producers
- SuperRealities: Bay Area  
MegaStars: The TechoMagicians
- Wall Street/Venture Capital  
Roundtable
- The Convergence of Science, Science Fiction  
and the New Technologies
- Digital Hollywood Roundtable
- The Global Village: Reflections on Marshall  
McLuhan

### ★DAY 1 SuperSessions★

IBM  
Microsoft  
Sony  
3DO

### SEMINARS

- Title Development & Platform Evaluation: PCs,  
Video Games & Other Delivery Systems
- Analyzing the Games Industry  
Investment and Return
- Educational Title Development:  
Targeting Markets
- Video and Audio Databasing
- Virtual Reality As Entertainment
- Interactive Television Programming
- Multimedia Market Analysis
- The Love Machine: Merging Film, Music Video,  
Video Games and Virtual Reality

### PROFESSIONAL WORKSHOPS

PDA & Digital Product Marketing Analysis • Multimedia CD Application Development • Distribution  
Channels of Multimedia • QuickTime Movie Production • Developing Interactive Education • Digital  
Imaging • Microsoft Developers Workshop • Funding Games & Multimedia Titles

AMERICAN EXPOSITIONS, INC. The Soho Building 110 Greene St. #703 New York, NY 10012  
FOR MORE INFORMATION CALL (212) 226-4141



# Multi & Media

b  
e  
y  
o  
n  
d



## Artitorials: Taking Multimedia To The Streets

Beyond The Bleeding Edge At SF State

BY JONATHAN E.

Among the classes offered by the Multimedia Studies Program at San Francisco State University is "A New Journalism Career: Taking Multimedia to the Streets—Artitorial Productions."

The catalog description reads in part: "The ability to report information about events has opened the entire world to public scrutiny and placed thousands of news and documentary crews at events unfolding around the globe. As more news magazines like *Newsweek* or *Time* publish electronic complements to the conventional paper editions of their publications, and as home computer equipment improves, the advent of multimedia news gathering becomes accessible to almost anyone. New formats that give the viewer more control

and a greater depth of information, while being up-to-the-moment, are required."

This sort of prose really pushes a curious journalist's buttons. Indeed it would be nice if all this were true, but some aspects trip the hype detector. So George Pavlik, publicist for the program and instructor of another SFSU course, "Publicity for Multimedia," didn't have much trouble convincing me to come check out the Artitorials class and the ideas of its instructor, Barbara Mehlman. In my first phone conversation with Mehlman, she said that one objective of the class was to produce "a necklace of video haiku poems." I was hooked.

Copyright © 1993 by Jonathan E. All rights reserved. Jonathan E. has worked with desktop multimedia since 1988. He also writes about world music and the Archaic Revival for BAM. His USPS mailing address is c/o SoundSwell, 54 29th St., Richmond, CA 94804. His email address is jeve@well.sf.ca.us





**THE  
BEST  
FULL SERVICE  
DEALER IN THE  
BAY AREA  
since 1987!**



## "RT WORK HORSE"

**386 DX40 MHz 64K Cache  
BACK TO SCHOOL SPECIAL!**

- 4 MB RAM 70ns
- Mini Tower w/230 Watts
- 1.44 MB (3.5") Floppy Drive
- 120 MB IDE Hard Disk
- 2H/2F/2S/1P/1G Controller Card
- 14" Super VGA Monitor
- Trident Super VGA Driver 1MB
- 101 Keyboard
- Serial Mouse
- MS DOS 6



Other options or  
substitutions available

**\$949**

\$53/MONTH



## HOT MULTIMEDIA SPECIAL

**Turns Your PC Into A  
MultiMedia Workstation**

- Mitsumi Internal CD-ROM 350ms Access Time
- Sound Galaxy NX Sound Card w/MIDI
- 2 External Speakers
- 5 CD's Including Colliers Encyclopedia,
- World Atlas, US Atlas, Mavis Beacon Teaches Typing, Chessmaster 3000
- Windows Compatible

**ONLY \$225**

FREE INTRO  
CLASS TO  
DOS &  
WINDOWS  
W/EVERY  
SYSTEM  
PURCHASE!

"WE BELIEVE EVERY CUSTOMER  
SHOULD LEAVE OUR OFFICE  
TOTALLY SATISFIED. THAT'S  
WHAT WE STRIVE FOR"

RAY TETREault  
OWNER-RT COMPUTERS



## "RT MULTIMEDIA SYSTEM"

**486DX-33 64K Cache**

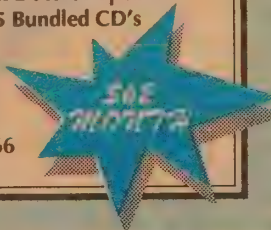
- 4 MB RAM 70ns
- Mini Tower w/230 Watts
- 1.2 MB (5.25") Floppy Drive
- 1.44 MB (3.5") Floppy Drive
- 120 MB IDE Hard Disk
- 2H/2F/2S/1P/1G Controller Card
- 14" Super VGA Monitor .28dp
- Trident Super VGA Driver 1MB
- 101 Keyboard
- 3 Button Mouse
- MS DOS 6
- MS Windows 3.1
- Internal CD-ROM
- Sound Galaxy NX Sound Card w/MIDI & 2 Stereo Speakers
- 5 Bundled CD's



Other options or  
substitutions available

**\$1575**

\$62/MONTH  
Easily Upgradable To 486DX-66  
For Only \$300



## "RT PREMIER"

**486DX 33 MHz 64K Cache**

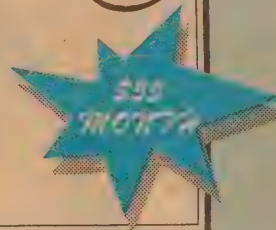
- 4 MB RAM 70ns
- Mini Tower w/230 Watts
- 1.2 MB (5.25") Floppy Drive
- 1.44 MB (3.5") Floppy Drive
- 120 MB IDE Hard Disk
- 2H/2F/2S/1P/1G Controller Card
- 14" Super VGA Monitor .28dp
- Trident Super VGA Driver 1MB
- 101 Keyboard
- 3 Button Mouse
- MS DOS 6
- MS Windows 3.1



Other options or  
substitutions available

**\$1349**

\$55/MONTH



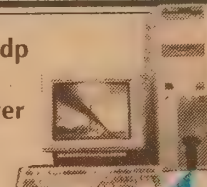
## "RT LOCAL BUS"

**486DX 33 MHz or 486DX2 66 MHz  
VESA LOCAL BUS 256K Cache**

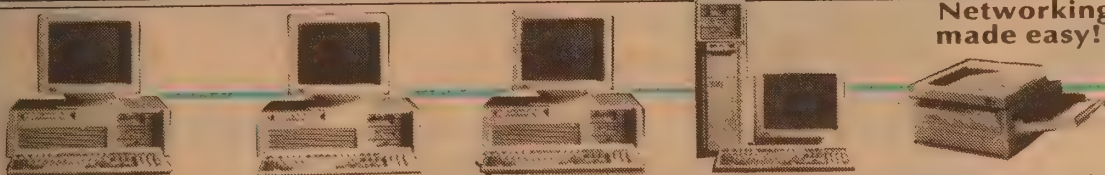
- 4 MB RAM 70ns
- Mid Tower w/230 Watts
- 1.2 MB (5.25") Floppy Drive
- 1.44 MB (3.5") Floppy Drive
- 120 MB IDE Hard Disk
- 2H/2F/2S/1P/1G Controller Card
- LOCAL BUS IDE Controller



- 14" Super VGA Monitor .28dp (Non-Interlaced)
- Genoa VESA Local Bus Driver
- 101 Keyboard
- 3 Button Mouse
- MS DOS 6
- MS Windows 3.1 Other options or substitutions available



33 MHz **\$1499** 66 MHz **\$1729**  
\$55/MONTH \$68/MONTH



Networking  
made easy!!

**LANTASTIC & MICROSOFT WINDOWS FOR WORKGROUPS  
3-300 USER NETWORK**

**\*Affordable \*Low Maintenance \*Easily Upgradable**

CALL FOR MORE INFORMATION

PRICES  
REFLECT  
CASH  
DISCOUNTS



**FINANCING  
AVAILABLE**

1630 OAKLAND RD.  
SUITE #A-112  
SAN JOSE, CA 95131

MON-FRI 9-6, SAT 10-4

FAX: (408) 437-1156

**408 437-3063**

PRICES SUBJECT TO CHANGE W/O NOTICE NOT RESPONSIBLE FOR TYPOGRAPHIC ERRORS





# MultiMedia & beyond

Continued from page 297

the PC using the PC's sound card in a kind of a 'low-res' audio. Then if I like it I pipe it over the network to the Mac.

"Both the Mac and Windows can read the Standard MIDI file, which is a blessing. But my Ensoniq keyboard has its own sequencer, and it writes disk files that can only be read out on a PC, not a Mac. The

DigiDesign software gives you a prep program that allows you to create a CD master tape to download onto DAT to be able to send to a service bureau for mastering and pressing. With a desktop CD recorder, I could just image it over to cut a copy.

"Currently I'm working on scoring the radio show's theme song, for example, and

NPR has asked me for some stuff to use on *All Things Considered*."

## CENTRIS: PAYOFFS AND TRADEOFFS

"I'm a person," says Davis, "for whom the Centris 610 would not cut it, because I need to have lots of slots. The DigiDesign card requires a full-size slot, so I'm locked out of the 610 as a solution. The other Macs aren't powerful enough. And a Quadra was so much more expensive. The breakthrough with the Centris line was that it was significantly above the other levels of computers I was looking at; the IIfx, the IIfx. The Centris is right up there in that Quadra-level performance, like with the fast SCSI which benefits the

## Fred Davis:

"With four-track digital audio, you burn up 20MB per minute! I have about an hour and a half of recording time on this 1.6GB drive. But because it's an all-digital system, I can write out sections onto an audio DAT tape in a digital copy, or copy an entire audio CD in a digital image to the hard disk and then reedit it. Or I can compile enough of my own music to fill an entire CD, master that off to a DAT tape backup, and send it off for CD mastering."

music application as well. Going to a Quadra would add performance, but not by a critical margin."

Instead of the 30-pin or 36-pin SIMMs, the Centris line uses 72-pin SIMMs that come from the IBM-PC world, which are easier to configure in upgrading your RAM bank. "When you add memory to the Centris 650, you have to add it in similar SIMM [single in-line memory module] units or else it messes up the RAM interleave and bogs the system down," Davis explains. "Some people put in two 4MB sticks instead of one 8MB stick, and although the computer will recognize the memory, it messes up the interleave. But if you maintain the interleave, the 650 keeps its Quadra level of performance.

## RESOURCES:

**Apple Computer, Inc.**

20525 Mariani Ave.  
Cupertino, CA  
95014  
(408)996-1010

**DigiDesign Inc.**

1360 Willow Rd.,  
Ste. 101  
Menlo Park, CA  
94025  
(415)688-0600

**OpCode Systems Inc.**

3950 Fabian Way,  
Ste. 100  
Palo Alto, CA  
94303  
(415)856-3333

## SUN USER GROUP West

CONFERENCE & EXHIBITION

Produced By PCI   
Trade Show Management

San Jose  
Convention  
Center  
San Jose,  
California  
Dec. 6 - 9, 1993

If you are interested please complete & return to the address below, or FAX to (512) 331-3950 or call 1 (800) 727-EXPO(3976) or E-MAIL to [sugshow@pcinews.lonestar.org](mailto:sugshow@pcinews.lonestar.org)

Please send me information on:

- ☐ Attending ☐ Speaking  
☐ Exhibiting

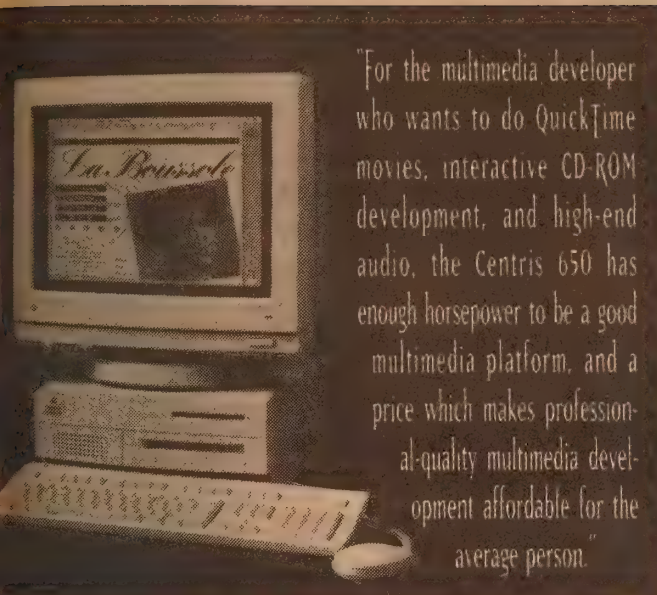
Name \_\_\_\_\_  
Company \_\_\_\_\_  
Street \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Telephone \_\_\_\_\_

Sun User Group West Conference & Exhibition, 12343 Hymeadow Drive,  
Bldg. 3, Austin, TX 78750 • Phone 1(800) 727-EXPO (3976) • FAX (512) 331-3950

MT



# MultiMedia & beyond



"For the multimedia developer who wants to do QuickTime movies, interactive CD-ROM development, and high-end audio, the Centris 650 has enough horsepower to be a good multimedia platform, and a price which makes professional-quality multimedia development affordable for the average person."

Getting that Quadra kind of capability at that price, I think, is what made the 650 such a popular machine.

"If you go to a Quadra 800 or 950, you just don't get that much more bang for your buck. For some people, that 25% more performance is important; it depends on what you're doing. But for the multimedia developer who wants to do QuickTime movies,

interactive CD-ROM development, and high-end audio, the Centris 650 has enough horsepower to be a good multimedia platform, and a price which makes professional-quality multimedia development affordable for the average person.

"I have a 486/50 PC, and it's a pretty decent PC. It's equivalent in many ways to a Centris, but it doesn't hold its own against the Centris in terms of the stability of the platform for multimedia one

little bit. Even though I am a Windows expert, I could not do what I'm doing today on the PC platform at any price.

"The Centris with the coprocessor upgrade doesn't have the slots but is a good performance system, and—because it's upgradable to PowerPC level performance—it's a safe bet for users. Apple promises that the Centris 610 and 650, and

the Quadra 800 and 950, will be upgradable with the PowerPC motherboard. Who cares when? It will take a while for the software to catch up anyway."

## GOOD NEWS/BAD NEWS

After hearing all that, we have to report that you may not be able to find a Centris 650 sitting on the shelves of your favorite dealer. Apple has not officially discontinued the 650, but it is no longer making the machine in this configuration.

The assembly lines are now devoted to producing the new Centris 660AV, along with the Quadra 840AV. (We'll examine these exciting developments in a later issue.) The Centris 660AV, however, is built on a souped-up 610 "pizza box" platform, so it will not have the three slots of the 650. Happily, there will be, in the near future, enhanced non-AV Centrises as well. The 610 will swell from 20 to 25MHz, while the 650 rises to 33MHz, bumping the 33MHz Quadra 800 off the shelf. ■

## Confused About Desktop Video?

### Do you have questions about:

What is an A/B-Roll system? • Are my present VCR's usable for video editing? • What is the best format for me for video editing? • What is available for single frame animation? • Is the Video Toaster the system for me? • I have a Mac computer, what is my best solution? • Where can I get training on desktop video? • What is the best character generator? • I have an MS-DOS computer, what is the best solution? • How do I do animations? • Can I see the equipment in operation?

**HT Electronics can answer these and all of your Desktop Video questions. Plan on attending our free weekly seminars. Attend one or all of the following seminars to make an informed selection for the best solution for your business:**

Newtek Video Toaster with RGB Amilink - Amiga all-in-one broadcast video production suite  
Fast Video Machine for the Macintosh - A/B-Roll, DVEs, Audio Mixer, Video Switcher & more  
Matrox Personal Producer - Low Cost high performance video editing on your PC  
Videomedia OZ - A/B-Roll editing for either PC or Mac or to control the Video Toaster..  
Matrox Studio - A/B/C-Roll editing with 24-bit graphics and high performance digital audio.  
*Seminars begin Fridays at 10AM. Please call for schedule and to reserve space. Personal demos available by appointment.*

**FAST**

**STUDIO**

### Authorized Reseller for:

Newtek Video Toaster  
Matrox Studio  
Fast Video Machine for the PC  
Videomedia OZ  
Matrox Personal Producer  
Fast Video Machine for the MAC  
Commodore Amiga  
RGB Amilink  
Inscriber Character Generator

**Personal Animation Recorder**  
Record live video and Playback 24 bit  
(16 million color) animations at 30  
frames per second. Full screen!

**HT**  
**ELECTRONICS**  
computer systems

275 N. Mathilda Ave., Sunnyvale, CA 94086  
Store Hours: 9:30-6 M-F • 9-5 Sat • Closed Sunday

(408)737-0900  
fax (408)245-3109



# MultiMedia beyond



Mehlman entered the classroom hauling a couple of portable computers, miniature hard drives, and a camcorder, and talking a meg a millisecond about the status of various pieces of equipment, how far she'd driven that day, who she'd spoken with to make sure the software was going to work with the hardware, and what the plans were for the weekend field trip to the streets of the Marina.

## ARTITORIAL?

Mehlman came up with her idea of artitorials in 1983. She was trying to earn a living with her MFA, which she had discovered didn't do much for her as far as working as an artist was concerned. Although she loved to paint, she wanted "to have a dia-

logue with the world" rather than exhibit in a traditional gallery setting.

event. They should take the responsibility, as a journalist, to look at other people's opinions, to research the connections to other people's papers and information about it, to interview the different players in that event to get it from their point of view, and to see the context, the historical context, for the event."

In many ways, an artitorial system is an evolution of the current state of story-gathering and -telling, rather than a revolution. The supposed objectivity of the press is a sham, as Mehlman vehemently stated when recalling her early days of attempting to interest newspapers in her proposals. Basically, any reporter—print, radio, or video—gathers material, researches background, and organizes and prioritizes the story with some degree of personal or corporate influence. Being upfront about one's

The software used will be newly designed and more task-oriented than current tool-based designs. The simple part of this software will be graphics-processing tools that will allow the artitorialist to "paint" on the video or add animation.

Most of the software is considerably more complex and requires some imagination to visualize, since there is, as yet, no working demo. Mehlman has a system of analyzing and describing events that the artitorialist would use to identify and tag his or her reactions to elements of the event. Those tags would be linked to a large database, the object thesaurus, which would pull up associated images, sounds, or other references. Mehlman explains: "The essence of the object thesaurus is being able to give a context for images, both objectively and subjectively, and to use other forms of classification so that you can go back and forth between words and imagery and sounds and other types of elements that we exist in and find how they relate to each other.... I don't think that you can describe anything all in a painting, or describe anything all in words. Each has its place, and the best is

when they're used correctly and together."

Mehlman proposes that the database will "know about itself" and the emotional preferences and meanings of its user. At any time the search level for associations could be spec-

In essence, an artitorial is a short, subjective multimedia

logue with the world" rather than exhibit in a traditional gallery setting.

One day, as she watched a TV newscast editorial, she had the epiphany that "I could do that better with visual images."

Although she had no experience with computers, she thought about the problem and imagined that this could be an indigenous artform for computers. The next day she got a job selling computers, which allowed her to learn and network on company time.

In essence, an artitorial is a short, subjective multimedia exposition of an event, which may be anything from a human interest story to a political upheaval of local or international scale to a trade show. The word is coined from art and editorial—the editorial provides the subjective knowledge or opinion of what happened, while the art supplies the aesthetic treatment of that knowledge.

The kernel of the idea is that an artitorialist goes to an event solo; shoots video; digitizes it; applies "painterly" effects; adds sound from either interview, voiceover, or library sources; and links various elements to a database of still photos, connected articles, and other background material. Mehlman hopes that "an artitorialist will be a person going out on-site and telling about their own impressions in whatever kind of aesthetic, in whatever kind of personalized way, that they directly see the

stance while using ancillary media to illustrate the story was demonstrated quite clearly by Scoop Nisker in his famed KSAN news shows.

exposition of an event—a human interest story, a political

However, artitorials do offer some major, perhaps even revolutionary, steps forward in the way they use and manipulate several ancillary media, and also in the way they

upheaval of local or international scale, a trade show.

may eventually allow users and viewers to provide feedback and express themselves in turn.

One of Mehlman's key concerns is that the artitorialist should be able to go to the event alone and perform all the required tasks in something close to real time. This will be accomplished through use of portable computers with multimedia capabilities, using a type of database she calls "an object thesaurus." Mehlman believes that current newsgathering techniques are inadequate for artitorials and that computers are needed because "a computer has a lot better memory, and it can sort through things a lot better." Mehlman hopes that the artitorial system will allow users to better capture their responses to events and to better express those responses.

ified from simple iconic representation to deeper metaphorical allusions. Individual artitorialists will have their own portable database for on-site work, but there will also be a larger, publicly accessible online system for which each artitorialist will customize tags.

As the event unfolds, the artitorialist will be able to perform sequences of transitions quickly on images and sounds pulled from the database and mixed with the live video to produce "graphical sentences." The computer will become a much more active partner in the creation of effects, while the human will perform more of an editing function, selecting from among the choices that the computer presents and making a final edit from the computer's rough cut. Mehlman describes this module of the software as "a concept



# COMTEK Computer

COMPLETE SYSTEMS  
or BUILD YOUR OWN!

SALE!  
486DX/33/128K  
**\$175**

COMING SOON  
CONCORD

- Build your own computer and save!
- Upgrade and repair your own computer at our centers
- One year warranty on parts and labor
- We offer the best quality, best service and lowest price

## AMERICAN MOTHERBOARD

### NICE

486-33/DX2-66  
256K VLB .....\$479/699

486-50/DX2-66 256K  
Mini EISA VLB .....\$699/779



486-33/DX-66 256K,  
3 VLB Slots .....\$489/699

486-50 256K, 3 VLB Slots...\$675

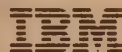
486-33/DX-66 256K EISA,  
3 VLB Slots .....\$719/929

ORCHID



486-33/DX2-66  
256K VLB .....\$509/753

486-50/256K VLB .....\$665



486SLC-50 64K Cache ISA ..\$315

| COMPUTER<br>SYSTEM | IDE HARD DRIVE |        |        | SYSTEM<br>CONFIGURATION |
|--------------------|----------------|--------|--------|-------------------------|
|                    | 80MB           | 120MB  | 210MB  |                         |
| 486DX66/128K       | \$1425         | \$1449 | \$1509 | • 4MB RAM               |
|                    |                |        |        | • 1.44 TEAC             |
| 486DX50/128K       | 1355           | 1379   | 1439   | • 1.2 TEAC              |
|                    |                |        |        | • Minitower             |
| 486DX33/128K       | 1199           | 1220   | 1279   | • 200 w/PS              |
|                    |                |        |        | • 101<br>Keyboard       |
| 486SLC50/64K       | 1165           | 1189   | 1259   | • IDE 2FD, 2HD          |
| 486DLC33/128K      | 985            | 1009   | 1069   | • SVGA<br>.28 Monitor   |
|                    |                |        |        | • SVGA w/1MB            |
| 386DX40/128K       | 945            | 969    | 1029   | • 2S, 1P, 1G            |



**NOVELL NETWORKS**  
**(415) 424-8151**

## VESA LOCAL BUS SPECIAL

**486/33/256K**

**\$1399**

- 4MB RAM
- 210MB Hard Drive
- SVGA Monitor .28dp NI
- VL Bus Video w/1MB
- 1.2 & 1.44 TEAC Floppy Drive
- VL Bus IDE Controller
- 2S, 1P, 1G
- Mini Tower Case
- 101-Key Keyboard

486DX66 .....\$1649  
486DX50 .....\$1549

## MOTHERBOARD

486DX/66/128K VL Bus .....\$620  
486DX/50/128K VL Bus .....559  
486DX/33/128K VL Bus .....409  
486DLC/33/128K ISA .....159  
386DX/40/128K ISA .....140  
486SLC/50/64K .....315

## MONITOR

SVGA (1024x768) .28 .....\$245  
SVGA (1024x768) .28 Non-Int .....269  
SVGA Viewsonic 4E .....309  
SVGA Viewsonic 6E Non-Int .....329  
SVGA Viewsonic 6FS .....559  
SVGA Viewsonic 15 Non-Int .....655  
SVGA Viewsonic 17 Non-Int .....980  
MAG 15F/17F .....580/1039  
NEC 3FG/4FG .....639/739  
SVGA 17" Flat .....799  
SVGA 15" Flat (Arche) .....399

- 100% Financing with 90 Day Free Interest
- Accept Visa and Mastercard
- Price Subject to Change without Notice
- Dealer Inquiries Welcome
- Not Responsible for Typographical Errors
- Prices based on Cash Prices

## VIDEOCARD

Cirrus Logic w/1MB True Color .....\$55  
Trident 1MB .....57  
Tseng ET4000 .....85  
Diamond Stealth VL Bus w/1MB .....179  
Orchid Fahrenheit VL Bus w/1MB .....179  
Genoa 8500 VL Bus w/1MB .....125  
ATI Pro VL Bus w/2MB .....349  
Orchid Celsius VL Bus w/2MB .....319  
Orchid P9000 VL Bus w/2MB .....345  
AIR P9000 VL Bus w/2MB .....385  
Spider VL Bus .....CALL

## CASES

Mini Tower .....\$49  
Medium Tower .....75  
Baby AT .....65  
Full Tower .....99

## MODEMS & FAXES

Zol 2400 Baud .....\$39  
Zol 96/24 Modem & Fax w/Win .....59  
Zoltrix 14.4 Modem & Fax .....175

## HARD DRIVES

CONNER  
CP30084E 80MB IDE .....\$159

CP30104 120MB IDE .....\$179  
CP30204 213MB IDE .....219  
CP30254 250MB IDE .....249  
CP30334 340MB IDE .....319  
CP3544 540MB IDE .....595  
CP3540 540MB SCSI .....639  
CP 1.3GB SCSI .....CALL

MAXTOR  
7120A 130MB IDE .....\$180  
7213A 210MB IDE .....209  
7245A 245MB IDE .....229  
7345A 340MB IDE .....305  
LXT535A 535MB IDE .....599  
LXT540A 540MB IDE Fast .....759  
LXT540S 540MB SCSI Fast .....779  
LXT1240S 1.2GM SCSI Fast .....1219

## KEYBOARD

Chicony .....\$23  
Keytronic USA .....40  
Maxi Switch .....35  
Omnikey 102/Ultra .....89/99  
Focus .....40

## CONTROLLERS

IDE w/IO .....\$20  
IDE VL Bus w/IO .....55  
SCSI-2 VL Bus (AIR) .....285

SCSI VL Bus (Bustek) 545S .....CALL  
SCSI VL Bus (Ultrastor) 34F .....CALL

## MULTIMEDIA & CD-ROM

Sound Blaster .....\$95  
Sound Blaster Pro Basic .....149  
Sound Blaster 16ASP .....239  
Pro Audio Spectrum w/SCSI .....185  
Multimedia Upgrade Kit w/SW .....495  
CD ROM 31A .....265  
CD ROM Toshiba 3401B .....445

## MOUSE

Microsoft Compatible .....\$15  
Microsoft Serial .....49  
Microsoft Bus .....69  
Logitech MouseMan .....49

## SIMMS & MATH

1MB SIMM .....CALL  
4MB SIMM .....CALL  
512KBx36 SIMM (72 pins) .....CALL  
1MBx36 SIMM (72 Pins) .....CALL  
4MBx36 SIMM (72 Pins) .....CALL  
Other .....CALL

## PALO ALTO

3527 El Camino Real  
Palo Alto, CA 94306  
**(415) 424-8151**

## DUBLIN

6602 Dublin Blvd.  
Dublin, CA 94568  
**(510) 803-1530**

## SAN BRUNO

1778 El Camino Real  
San Bruno, CA 94066  
(Between Millbrae & San Bruno Ave.)  
**(415) 225-0153**  
**Open Sunday**

## SANTA CLARA

5029 Stevens Creek Blvd.  
Santa Clara, CA 95051  
**(408) 249-4297**  
**Open Sunday**





# Multi & Media

## Computers In Painting, Sculpture, And Ceramics

Bridges Between The Virtual Computer World  
And Sensory Experience

BY JUDY MALLOY

Copyright © 1993 by Judy Malloy. All rights reserved. Judy Malloy has been making and studying artists' software since 1985. Her work has been shown and published internationally. She is an associate editor of Leonardo and Leonardo Electronic News.

The majority of artists who work with paint or clay or steel or textiles see no need to utilize computers in their work, but as computers seep into every walk of our lives, some studio artists are finding ways to merge the computer's capabilities with their "traditional" ways of working. Craftspeople are combining digitally stored information and computer-produced patterns into the process of making the physical, handmade artwork. Painters are utilizing the intense computer palette, and sculptors are integrating computers into both the design and the fabrication of their sculptures.

Max Lanier and Lora McDonald, whose collaboratively produced limited edition and handmade artists' books have been made, in the past, with fine printing and handmade paper as well as with sculptural materials such as rubber and metal, are designing a series of electronic books that will be displayed on a specially built table. The "books" on the table will be traditional in that they will be book shaped and will contain hand-turnable "pages." However, the tables will hold small built-in computer monitors that display streams of computer-produced and -displayed information. They call this work *Readings in Organized Chaos*.

Lanier and McDonald are interested in the information carrying capabilities of computers, but are not comfortable with artware's "conspicuous lack of tactility." "Curling up with a good data file never presents itself as an option," they say. They think of *Readings in Organized Chaos* as providing a bridge between the virtual

### RESOURCES

Coiffure Carnival  
(Video Series)

Muriel Magenta  
School of Art  
Arizona State  
University  
Tempe, AZ  
85287-1505

The Computer, a  
Tool for  
Sculptors, a  
Multimedia

Survey of Current  
Applications of  
the Computer to  
Sculpture (Video-  
tape)

The International  
Sculpture Center  
1050 17th St.  
NW, Ste. 250  
Washington, DC.  
20036

### Deep Creek School

Dan Collins and  
Laurie Lundquist,  
Directors  
PO Box 171  
Telluride, CO  
81435 USA  
(303)728-4189  
(home)

(602)965-8311  
(Arizona State  
University)

Email:  
IDDL@ASUVM.I  
NRE.ASU.EDU



**FREE Installation on Every MultiMedia Package!**

# MULTIMEDIA

**Share Endless Hours of Adventure  
and Sound with HiQ's MultiMedia System!**



**You Want 'Em,  
We've Got 'Em -  
Hot New  
CD Titles!**

|                                        |      |
|----------------------------------------|------|
| American Business Phonebook 92 .....   | \$19 |
| ARIS Jets & Props 2Dsk .....           | \$21 |
| ARIS Wild Places (Picture Clips) ..... | \$19 |
| ARIS Wizard Test and Tune U .....      | \$19 |
| ARIS World View (Picture Clips) .....  | \$19 |
| Audubon Birds .....                    | \$19 |
| Audubon Mammals .....                  | \$19 |
| Barney Bear goes to Space .....        | \$19 |
| Barron's College Guide .....           | \$19 |
| Battle Chess .....                     | \$19 |
| Beauty & the Beast .....               | \$19 |
| Brain Drain .....                      | \$19 |
| Business Master .....                  | \$21 |
| California Collection .....            | \$19 |
| Carmen SanDiego-Deluxe .....           | \$21 |
| Chess Maniac .....                     | \$49 |
| CICA Windows .....                     | \$19 |
| Clip Art Heaven .....                  | \$19 |
| Clip Art Goliath .....                 | \$19 |
| Composer Quest .....                   | \$25 |
| Family Doctor .....                    | \$19 |
| FontMaster I .....                     | \$19 |
| FontMaster II .....                    | \$21 |
| Future Games .....                     | \$19 |
| GIFS Galore .....                      | \$19 |
| Great Cities-Vol I .....               | \$23 |
| Great Cities-Vol II .....              | \$23 |
| Indiana Jones- Fate Atlant. ....       | \$49 |
| Killer Track CD-Music Lib .....        | \$19 |
| Kodak Photo Access .....               | \$19 |
| Let's Play .....                       | \$19 |
| Mantis Experimental Fighter.....       | \$19 |
| Mavis Beacon Typing 2.0MPC .....       | \$21 |
| Mirror, Mirror .....                   | \$19 |
| Nat'l Geographic Mammals .....         | \$23 |
| NiteOwl 9 Shareware .....              | \$29 |
| Oldies But Goodies .....               | \$19 |
| Our Solar System .....                 | \$19 |
| PC Medic .....                         | \$25 |
| PC SIG 12 Shareware .....              | \$23 |
| Playing w/Languages-English .....      | \$19 |
| Playing w/Languages-French .....       | \$19 |
| Playing w/Languages-German .....       | \$19 |
| Playing w/Languages-Japanese .....     | \$19 |
| Playing w/ Languages-Spanish .....     | \$19 |
| Publish It! - 2.0 .....                | \$19 |
| San Diego Zoo/Animals .....            | \$19 |
| Secret Weapon of the Luftwaffe .....   | \$19 |
| SFX-300 Sound Effects .....            | \$19 |
| Seventh Guest .....                    | \$55 |
| So Much Shareware II .....             | \$19 |
| Speedway .....                         | \$65 |
| Tempra Kodak Access S/W .....          | \$19 |
| World of Flight .....                  | \$29 |
| World of Trains .....                  | \$29 |
| Dr. Games Vol. 1 .....                 | \$19 |
| Dr. Music Vol.1 .....                  | \$19 |
| Dr. Windows S/W Vol.1 .....            | \$19 |
| Dr. Shareware Vol.1 .....              | \$19 |
| Variety Store .....                    | \$19 |

Please Call for more Games or CD Titles...

## HiQ Multimedia MultiMAGIC® System

- Intel 486DX-33MHz Processor VLB
- 256K SRAM Cache
- 4MB RAM (70ns) Exp. to 32MB
- 1.2MB and 1.44MB TEAC FDDs
- 210MB IDE Western Digital IDE Hard Disk Drive, 13ms
- VESA Local Bus IDE Controller 2/H/2F with 2 S / 1 P / 1 Game Port
- Fahrenheit VESA Local Bus 32-Bit SVGA card, 1280, with 1MB
- 14" ACER SVGA 1024 x 768, 0.28dp, Non-Interlaced Color Monitor
- 101 Enhanced Waterproof Keyboard
- AT Case with 230W Power Supply

**FREE with this System! Hi-Res Mouse,  
MS Windows 3.1 & MS-DOS 6.0 w/Manuals!**

**PENTIUM  
READY!**



- ★ Toshiba 3401B Internal CD-ROM (The Fastest CD-ROM)
- ★ Media Vision Pro AudioSpectrum 16-Bit w/SCSI port
- Amplified Stereo Speakers



## Software CD Titles Include:

- Compton's Multimedia Encyclopedia
- Microsoft Bookshelf
- Where in the World is Carmen San Diego?
- San Diego Zoo presents "The Animals"

**\$65 Per Month**

**Only \$2299**

## HiQ Performance Entertainment Kit

### Toshiba XM-3401B CD-ROM

- Media Vision Pro AudioSpectrum w/ SCSI Port
- Amplified Stereo Speakers

### CD Software Titles Include:

- Where In the World is Carmen San Diego
- San Diego Zoo Presents "The Animals"
- Compton's Encyclopedia Software
- MicroSoft Bookshelf 93

**only \$699**

## HiQ New Generation Kit **only \$599**

### Teac CD-50 SCSI CD-ROM

- Media Vision Pro AudioSpectrum w/ SCSI Port
- Amplified Stereo Speakers

### CD Software Titles Include:

- Dr. Windows Shareware ■ King's Quest V
- Kodak Photo Access CD
- MicroSoft Bookshelf 1993
- US Atlas with Automap

## HiQ Family Plus Entertainment Kit **\$499**

### Panasonic CR-562B CD-ROM

- SoundBlaster Pro 16-bit Stereo Version
- Amplified Stereo Speakers

### CD Software Titles Include:

- Encyclopedia by Grolier Software Toolworks
- Mayo Family Health Clinic
- Where In the World is Carmen San Diego - Deluxe
- San Diego Zoo Presents "The Animals"
- MicroSoft Bookshelf 93

## HiQ Family Entertainment Kit **\$399**

### Panasonic CR-522B CD-ROM

- SoundBlaster Pro Stereo Version
- Mini Stereo Speakers

### CD Software Titles Include:

- Encyclopedia by Software Toolworks
- World Atlas by Software Toolworks
- Where In the World is Carmen San Diego - Deluxe
- San Diego Zoo Presents "The Animals"
- MicroSoft Bookshelf 93

## SCSI/ AT Bus CD-ROM Drives

CD-ROM Drive only, requires SCSI Interface & drivers, for IBM or MAC

### Toshiba XM-3401B

200ms avg. access, 330KB/sec trf, 256KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$399** External 3401E \$539

### Teac CD-50 CD-ROM

265ms avg. access, 350KB/sec trf, 256KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$339** External OEM \$439

### Texel DM-3024 Drive

265ms avg. access, 300KB/sec trf, 64KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$339** External 5024 \$469

### Nec CDR-55 CD-ROM

340ms avg. access, 300KB/sec trf, 64KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$299** External OEM \$379

### Panasonic CR-562

320ms avg. access, 300KB/sec trf, 64KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$239** External OEM \$329

### Panasonic CR-522

390ms avg. access, 150KB/sec trf, 64KB buffer, Photo CD multisession, XA, SCSI-2, internal..... **\$179** External OEM \$259

AT-Bus, 8-Bit card, drivers for Panasonic 522/562.....\$20  
Driver/Audio/Cable Kit from 522/562 to SBPro/16.....\$20  
All Card & Kits come complete w/Cables & Drivers

## Sound Cards

**Creative Labs SB Pro Deluxe**  
8-Bit Stereo, Free Encyclopedia CD ..... **\$129**

**Creative Labs SB Pro 16-Bit**  
16-Bit Stereo, Free Ency, CD, Voice SW ..... **\$169**

**Creative Labs SB Pro 16-ASP**  
16-Bit Stereo, Free Ency, CD, Voice SW ..... **\$219**

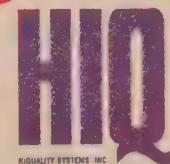
**MediaVision ProAudio Spectrum**  
16-Bit Stereo, SCSI CD Interface ..... **\$139**

**MediaVision ProAudio Studio**  
16-Bit Stereo, SCSI CD Interface ..... **\$209**

## CD Title Paks for Windows

- The MultiMedia Electronic Encyclopedia
- The Animals
- The World Atlas (MPC)
- The U.S. Atlas (MPC)
- Mavis Beacon Teaches typing
- The Chessmaster 3000

**\$99**



740 N. Mary Ave.,  
Sunnyvale, CA 94086  
TEL: (408) 245-5836  
FAX: (408) 245-3108

For Orders Call:  
**1-800-827-5836**



# Call the Quality Leader

**Lifetime Labor & 1 Year Parts Warranty**

**We Use The Finest "Made in the USA" Motherboards**



**FREE**  
2-Hour Software  
Installation  
on all systems.  
**FREE** labor on upgrades  
on all of our systems  
for 5 years.

## Micronics VESA Local Bus System

### 8MB RAM/ 200MB Local Bus System

- Micronics VESA Local Bus 486 Motherboard
- Socket for Intel's overdrive chip
- 8MB RAM (Expandable to 64MB on board)
- VESA Local Bus 2FD/2HD IDE Controller Card
- 213MB Maxtor 15ms IDE Hard Drive
- Diamond Stealth/24 or Orchid 1280/plus VESA Local Bus w/1MB
- Viewsonic 6e Non-Interlaced Monitor 14"
- Teac 1.2MB 5.25" Floppy Drive
- Teac 1.44MB 3.5" Floppy Drive
- 2 Serial/1 Parallel I/O Ports
- Maxiswitch or Focus 101-key Keyboard
- GT-300 Deluxe Full Tower w/Dual Fan & 300W P.S.
- DOS 6.0 w/Manuals
- Windows 3.1 w/Manuals
- Logitech Dexxa Mouse

EISA/VESA Motherboard ADD \$250

**MICRONICS**  
Computer, Inc.

|                |        |
|----------------|--------|
| 486DX2-66/256K | \$2390 |
| 486DX-33/256K  | \$2190 |
| 486SX-25/256K  | \$1990 |

| UPGRADE | Ultrastor 34F VLB SCSI+HD | DTC 3270VL VLB SCSI+HD | ATI Ultra VLB/1MB | ATI Ultra VLB/2MB | Viper or P9000/2MB |
|---------|---------------------------|------------------------|-------------------|-------------------|--------------------|
| ADD     | \$250                     | \$100                  | \$135             | \$170             | \$170              |
| UPGRADE | Maxtor 340MB              | Fujitsu 520MB          | Viewsonic 15"     | Viewsonic 17"     | Viewsonic 20"      |
| ADD     | \$80                      | \$390                  | \$200             | \$750             | \$1400             |

## Paradine 486 VESA Local Bus Systems

- Intel 486 CPU
- Zif Socket For Pentium Upgrade
- 128K Cache (Expandable to 256K)
- 4MB RAM 70ns (expandable to 32MB)
- 32-Bit VESA LB 2FD/2HD IDE Controller Card
- 213MB Maxtor IDE Hard Drive
- Viewsonic 6E Non-Interlaced SVGA .28 NI Monitor
- Orchid F1280/plus/VLB or Diamond Stealth Pro VLB SVGA Card w/1MB
- Teac 1.2MB & 1.44MB Floppies
- 2 Serial, 1 Parallel, 1 Game I/O Ports
- Focus or Maxiswitch 101-Key Keyboard
- Mid Tower Desk Top Case w/250W Power Supply
- Logitech Dexxa Mouse

486SX-25 486DX-33 486DX-50 486DX2-66

\$1395 \$1575 \$1775 \$1780

## Nice VESA Local Bus System

### 8MB RAM/ 200MB Local Bus System

- NICE VESA Local Bus 486 Motherboard
- 8MB RAM (Expandable to 32MB on board)
- VESA Local Bus 2FD/2HD IDE Controller Card
- 213MB Maxtor 15ms IDE Hard Drive
- Diamond Stealth/24 or Orchid 1280/plus VESA Local Bus w/1MB
- Viewsonic 6e Non-Interlaced Monitor 14"
- Teac 1.2MB 5.25" Floppy Drive
- Teac 1.44MB 3.5" Floppy Drive
- 2 Serial/1 Parallel I/O Ports
- Maxiswitch or Focus 101-key Keyboard
- GT-300 Deluxe Full Tower w/Dual Fan & 300W P.S.
- DOS 6.0 w/Manuals
- Windows 3.1 w/Manuals
- Logitech Dexxa Mouse

MINI-EISA/VESA Motherboard ADD \$100

**NICE**



|                |        |
|----------------|--------|
| 486DX2-66/256K | \$2175 |
| 486DX-50/256K  | \$2110 |
| 486DX-33/256K  | \$1975 |

| UPGRADE | Ultrastor 34F VLB SCSI+HD | DTC 3270VL VLB SCSI+HD | ATI Ultra VLB/1MB | ATI Ultra VLB/2MB | Viper or P9000/2MB |
|---------|---------------------------|------------------------|-------------------|-------------------|--------------------|
| ADD     | \$250                     | \$100                  | \$135             | \$170             | \$170              |
| UPGRADE | Maxtor 340MB              | Fujitsu 520MB          | Viewsonic 15"     | Viewsonic 17"     | Viewsonic 20"      |
| ADD     | \$80                      | \$390                  | \$200             | \$750             | \$1400             |

## Paradine 486 SLC-66 VESA Local Bus Systems

- **IBM** 486SLC2-33/66 *Landmark Ratings Higher Than The 486DX-33!*
- Math Coprocessor
- 4MB RAM
- 32-Bit VESA LB 2FD/2HD IDE Controller Card
- 250MB Western Digital 12ms IDE HD
- Orchid F1280/Plus VLB or Diamond Stealth Pro VLB SVGA Card w/1MB
- Viewsonic 6E Non-Interlaced Super VGA .28 Monitor
- TEAC 1.2MB & 1.44MB Floppies
- 2 Serial, 1 Parallel, 1 Game I/O Ports
- Focus or Maxiswitch 101-Key Keyboard
- Mid Tower or Desktop Case w/250W Power Supply
- Logitech Dexxa Mouse

**IBM**

**\$1625**

**Made in USA**  
**Motherboard Manufactured by IBM**  
\*3 Year Warranty not including Monitor

**3 YEAR  
PARTS  
WARRANTY\***

## altima Notebooks

### Altima SLC 33 \$1,499

- 486SLC-33
- 2MB Ram (up to 6MB)
- 120MB Hard Drive
- 10" LCD Mono Display

### Altima 466 \$3,095

- 486DX2 66MHz, 8K Cache
- 4MB Ram (Up to 20MB)
- 200MB Hard Drive
- 10" LCD Mono Display
- 486 Power!



### Altima 466C \$4,595

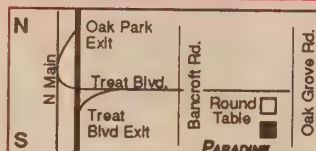
- 486DX2 66MHz, 8K Cache
- 4MB Ram (Up to 20MB)
- 200MB Hard Drive
- 9" Backlit Active Matrix Screen

### Altima 433 \$2,295

- 486DX 33MHz, 8K Cache
- 4MB Ram (Up to 20MB)
- 200MB Hard Drive
- 10" Backlit LCD Display

### Altima 433C \$3,995

- 486DX 33MHz, 8K Cache
- 4MB Ram (Up to 20MB)
- 200MB Hard Drive
- 9" Backlit LCD Display



Note South Bound 680 Customers:  
Exit Oak Park left on N Main,  
left onto Treat Blvd 3 Miles from 680

**PCS**  
**PARADINE**

**PARADINE**  
**COMPUTER SYSTEMS**

Oak Grove Plaza Annex • 2958 Treat Blvd., Suite A • Concord, CA 94518

**Hours:**  
Mon-Fri 9:30-7:00  
Sat 10:00-5:00



**Call the Quality Leader**

**(510) 825-6068**

**Fax: (510) 825-5940**

**BBS: (510) 825-0997**

**Leasing/Financing Available.**

Prices subject to change without notice.  
Not responsible for typographical errors.



# Paradine Peripherals

Excellent Pricing with The Best Service

## HARD DRIVES

### Maxtor

|                                        |         |
|----------------------------------------|---------|
| 130MB 7120AT 15ms 3.5" IDE .....       | \$195   |
| 130MB 7120S 15ms 3.5" SCSI .....       | \$205   |
| 213MB 7213AT 15ms 3.5" IDE .....       | \$219   |
| 213MB 7213S 15ms 3.5" SCSI .....       | \$259   |
| 245MB 7245AT 15ms 3.5" IDE .....       | \$239   |
| 245MB 7245S 15ms 3.5" SCSI .....       | \$279   |
| 340MB 7345AT 15ms 3.5" IDE .....       | \$319   |
| 340MB 7345S 15ms 3.5" SCSI .....       | \$379   |
| 1.2GB MXT-1240 8.5ms 3.5" SCSI-2 ..... | \$1,155 |
| 1.7GB P1-17S 13ms 5.25 SCSI-2 .....    | \$1,295 |

### FUJITSU

|                                     |       |
|-------------------------------------|-------|
| 520MB M2624T 12ms 3.5" IDE .....    | \$615 |
| 520MB M2624A 11ms 3.5" SCSI-2 ..... | \$615 |
| 5 year warranty                     |       |

### Quantum

|                                 |         |
|---------------------------------|---------|
| 240MB LPS240AT 3.5" IDE .....   | \$239   |
| 240MB LPS240S 3.5" SCSI .....   | \$259   |
| 525MB LPS525AT 3.5" IDE .....   | \$585   |
| 525MB LPS525S 3.5" SCSI .....   | \$585   |
| 700MB PD700S 3.5" SCSI-2 .....  | \$839   |
| 1.0GB PD1050S 3.5" SCSI-2 ..... | \$989   |
| 1.2GB PD1225S 3.5" SCSI-2 ..... | \$1,115 |

### CONNER

|                                    |       |
|------------------------------------|-------|
| 212MB CP30204 12ms 3.5" IDE .....  | \$235 |
| 212MB CP30200 12ms 3.5" SCSI ..... | \$295 |
| 540MB CP30544 10ms 3.5" IDE .....  | \$765 |
| 540MB CP30540 10ms 3.5" SCSI ..... | \$765 |

### TOSHIBA

|                                    |         |
|------------------------------------|---------|
| 877MB MK438FB 12ms 3.5" SCSI ..... | \$959   |
| 1.2GB MK438FB 12ms 3.5" SCSI ..... | \$1,155 |

### WESTERN DIGITAL

|                                  |       |
|----------------------------------|-------|
| 250MB WD2250 14ms 3.5" IDE ..... | \$249 |
| 340MB WD2340 12ms 3.5" IDE ..... | \$309 |
| 420MB WD2420 12ms 3.5" IDE ..... | \$429 |
| 3 year warranty                  |       |

### MICROPOLIS

|                                   |       |
|-----------------------------------|-------|
| 1.2GB MC2112A 10ms 3.5" IDE ..... | \$995 |
| 1.2GB MC2112 10ms 3.5" SCSI ..... | \$995 |

## MULTI-MEDIA

### CD-ROM DRIVES

|                                            |       |
|--------------------------------------------|-------|
| Panasonic CR-523-B .....                   | 195   |
| Toshiba XMS3401BTA 200ms 330KB/Sec SCSI .. | \$455 |
| NEC CDR-84 285ms 300KB/Sec SCSI .....      | \$495 |
| Texel 3024 265ms 300KB/Sec SCSI .....      | \$369 |
| Mitsumi 380ms 150KB/Sec AT-BUS .....       | \$195 |

### SOUND CARDS

|                                   |       |
|-----------------------------------|-------|
| Sound Blaster Pro Deluxe .....    | \$125 |
| Sound Blaster Pro 16 Deluxe ..... | \$229 |
| Pro Audio Spectrum 16 .....       | \$145 |
| Pro Audio Studio .....            | 209   |

### MULTI MEDIA KITS

Many CD-ROM & Sound Card Multi Media Bundles to Choose from! Plus a wide selection of CD-ROM Software! Call for Up to Date pricing and information!

## Business

### Business Automation & P.O.S.

Paradine Computer Systems offers you complete business automation solutions with General Business Accounting, Controlling and Point of Sale Packages. Also specific software for Auto Shops, Liquor Stores, Video Stores, Hair/Nail Salons, Dry Cleaning and Retail Stores.

Complete package including:

- IBM PS/VP 486DX-33 VLB
- 102MB HD
- 4MB RAM
- Color SVGA System
- Panasonic 2124 Printer
- Automation Software
- Complete installation and on-site set-up starting at only

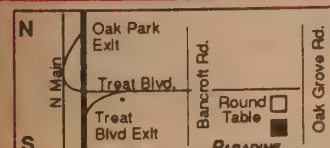
IBM

**\$3,800!**

Also available:

- Cash Drawers
- Bar Code Printers
- Bar Code Readers
- Receipt Printers
- Pole Displays
- Credit Card Readers
- Credit Card Authorization
- Multi-Station
- Networking

and much more!



Note South Bound 680 Customers:  
Exit Oak Park left on N Main,  
left onto Treat Blvd 3 Miles from 680



**PARADINE**  
COMPUTER SYSTEMS

Oak Grove Plaza Annex • 2958 Treat Blvd., Suite A • Concord, CA 94518

## Miscellaneous

### SCSI CONTROLLER CARDS

|                                       |       |
|---------------------------------------|-------|
| Adaptec 1542C 16-Bit ISA .....        | \$259 |
| Ultrastor 34F 32-Bit VESA LB .....    | \$269 |
| Bus Logic 32-Bit VESA Local Bus ..... | \$289 |

### TAPE BACK-UP

|                              |       |
|------------------------------|-------|
| 120MB Colorado DJ10 .....    | \$155 |
| 250MB Colorado DJ20 .....    | \$205 |
| 250MB Archive XL 9250i ..... | \$175 |

### MODEMS

|                                                         |       |
|---------------------------------------------------------|-------|
| US Robotics Sportster 14400/14400 Modem w/Group III Fax |       |
| Internal: .....                                         | \$179 |
| External: .....                                         | \$195 |
| Zoltrix 9600/2400 Send Fax Int Modem .....              | \$49  |
| Zoltrix 9600/2400 Send/Receive Int Modem .....          | \$65  |

### SyQuest REMOVABLE STORAGE

|                                          |       |
|------------------------------------------|-------|
| 44MB SQ555 Internal 20ms SCSI .....      | \$265 |
| 88MB SQ5110 Internal 20ms SCSI .....     | \$315 |
| 88/44MB SC5110C Internal 20ms SCSI ..... | \$399 |
| 105MB SC3105S Internal 20ms SCSI .....   | \$565 |
| 105MB SC3105A Internal 20ms IDE .....    | \$545 |

### MONITORS

|                                                                  |         |
|------------------------------------------------------------------|---------|
| Viewsonic 6e - 14" 1024x768 .28 Dot Pitch, Non-interlaced .....  | \$305   |
| Viewsonic 15 - 15" 1280x1024 .28 Dot Pitch, Non-Interlaced ..... | \$525   |
| Viewsonic 17 - 17" 1600x1280 .28 Dot Pitch, Non-Interlaced ..... | \$1,089 |
| Viewsonic 20 - 20" 1600x1280 .28 Dot Pitch, Non-Interlaced ..... | \$1,815 |

Hours:

Mon-Fri 9:30-7:00

Sat 10:00-5:00

No Surcharge

VISA MasterCard

Call the Quality Leader

**(510) 825-6068**

Fax: (510) 825-5940

BBS: (510) 825-0997

Leasing/Financing Available.

Prices subject to change without notice.  
Not responsible for typographical errors.



# Americal Group's Nationwide - Warehouse SIZZLIN' SUMMER SUPPLY SALE

*Save Time!*  
Each Disk 100%  
Tested & Formatted!

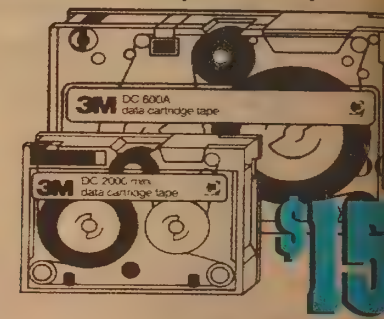
# 55¢

**41¢**  
QTY 1000  
720 KB DD Formatted

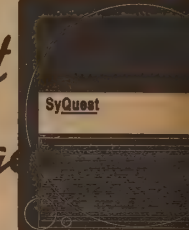
**1.44MB HD**  
Formatted

QTY 1000

*Backup Tapes*



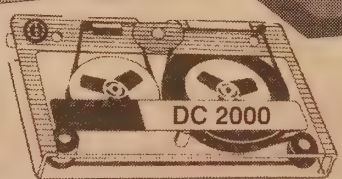
*SyQuest Cartridge*



| 44MB                     | 88MB                     |
|--------------------------|--------------------------|
| <b>\$66<sup>25</sup></b> | <b>\$98<sup>25</sup></b> |
| Qty 10+                  |                          |
| \$69.95 each 3-9 Pcs     | \$104.95 3-9 Pcs         |
| \$72.95 ea               | \$109.95 ea              |

Shipping: \$1.50 each

**3M**



| Order #      | Description      | Length        | Capacity             | 1-4          | 5-29         |
|--------------|------------------|---------------|----------------------|--------------|--------------|
| 12200        | DC2000           | 205'          | 20-40MB              | \$ 14.99     | \$ 13.49     |
| <b>12941</b> | <b>DC2120</b>    | <b>307.5'</b> | <b>120 or 250 MB</b> | <b>17.37</b> | <b>16.95</b> |
| 33047        | DC300XLP         | 450'          | 45MB                 | 19.32        | 17.36        |
| 00310        | DC600A           | 620'          | 60MB                 | 19.80        | 19.10        |
| 12802        | DC6150           | 620'          | 150MB                | 20.90        | 19.90        |
| 12937        | DC6250           | 1020'         | 250MB                | 26.30        | 25.39        |
| 12943        | DC6320           | 620'          | 320MB                | 29.98        | 27.98        |
| 12937        | DC6525           | 1020'         | 525                  | 34.89        | 32.68        |
| 43097        | Magnus 1.2 (1)   | 950'          | 1.2GB                | 37.49        | 35.34        |
| 42904        | Magnus 2.0 (2)   | 950'          | 2.0GB                | 39.99        | 37.89        |
| 40756        | DC2060 Thetamat* | 307.5'        | 60 or 120MB          | 24.84        | 22.32        |
| 40194        | DC2120 Ximat**   | 307.5'        | 250MB                | 22.69        | 20.39        |

\* Qic 40 Format \*\*Qic 80 Format Shipping - 60¢ ea

## Premium quality Bulk Data

| Order #      | Width | Description | Length | Capacity      | 1-4   | 5-29  |
|--------------|-------|-------------|--------|---------------|-------|-------|
| AM600A       | 1/2"  | DC600A      | 620'   | 60MB          | 15.98 | 14.98 |
| ANM6150      | 1/2"  | DC6150      | 620'   | 150MB         | 16.98 | 15.98 |
| AM2000       | 1/2"  | DC2000      | 205'   | 20-40MB       | 12.89 | 11.99 |
| AM2120       | 1/2"  | DC2120      | 307.5' | 120 or 250 MB | 15.29 | 14.59 |
| AM2120X FM1D | 1/2"  | DC2120X     | 307.5' | 120 or 250 MB | 18.29 | 17.59 |

## 4mm DAT & 8mm Data Tapes

| Description                 | SONY    | 3M      | Maxell  |
|-----------------------------|---------|---------|---------|
| 4mm DAT Tape (60m, 1.3GB)   | \$15.25 | \$14.95 | \$13.25 |
| 4mm DAT Tape (90m, 2.0GB)   | 17.19   | 16.95   | 15.95   |
| 8mm Data Tape (112m, 2.3GB) | 13.59   | 12.95   | 11.95   |

Shipping - 40¢ ea

| Order # | Description            | 500 | 100 | 50  |
|---------|------------------------|-----|-----|-----|
| CHD3F   | PreFormatted 3.5"DSHD  | 59¢ | 65¢ | 69¢ |
| MX2HD*  | High Quality 3.5"DSHD  | 59¢ | 65¢ | 69¢ |
| CDD3F   | PreFormatted 3.5"DSDD  | 43¢ | 45¢ | 49¢ |
| MX2DD*  | High Quality 3.5"DSDD  | 43¢ | 45¢ | 49¢ |
| CDD5*   | High Quality 5.25"DSDD | 21¢ | 23¢ | 26¢ |
| CHD5*   | High Quality 5.25"DSHD | 31¢ | 34¢ | N/A |
| CDD5F   | PreFormatted 5.25"DSDD | 31¢ | 33¢ | 36¢ |
| CHD5F   | PreFormatted 5.25"DSHD | 42¢ | 43¢ | 46¢ |

\*These Diskettes are ideal for software duplicators and Macintosh Owners. Each Premium disk is 100% tested and verified to be ERROR FREE.

3.5" Shipping charges: 60¢ per 25 pcs. / 5.25" Shipping charges: 60¢ per 50 pcs Call for large

## Geniune HP Laser Toner Cartridge

|                    |                             |
|--------------------|-----------------------------|
| HP 92298A \$109.95 | HP 51608A Deskjet \$17.5    |
| HP 92295A 75.95    | HP 51626A High Cap26.9      |
| HP 92291A 119.95   | HP 51606A Paintjet 17.9     |
| HP 92285A 79.95    | Canon BC-01 Stylewrite 19.9 |
| HP 92275A 68.95    | Refills \$9.95 & Up         |

# AMERICAL GROUP

**800-288-8025**  
Southern California Orders: 818-765-3040  
FAX ORDER line: 818-765-3887



Computer Products, Inc.  
PO Box 16388,  
North Hollywood, CA 91605  
12132 Sherman Way,  
North Hollywood, CA 91605

\*ORDERS RECEIVED BY 2 PM SHIPPED SAME DAY! \*N charges for Visa/MC, Discover & Amex. \*Add \$5 if COD. Add to all shipments for Handling & Packing. \*Calif. residents add tax. FAX ORDERS accepted, 818-765-3887. \*PO's accepted Colleges & Schools, Fortune 1000 Co.'s, Federal & State Agencies - Call first! Prices apply to 48-cont. states only - call for areas' charges. Prices subject to change without notice.



## By translating the fractal designs to knitted fabric Eleanor Kent was able to gain an understanding of how computer images are constructed that could then be carried back into her work with computer graphics.

computer world and the sensory experience of books.

San Francisco artist Eleanor Kent worked with computer graphics for several years but found that she missed working with her hands. When she returned to working with textiles, she brought ideas from the computer graphics world into a series of *Knitted Fractals*. "I wanted to make something tangible that I could hold in my hands yet still work with computers," she says.

For the *Knitted Fractals* series, Kent made knitting patterns from pictures of fractals in *Frontiers of Chaos* by H.O. Peitgen and P.H. Richter. She found that by translating the fractal designs to knitted fabric she was able to gain an understanding of how computer images are constructed that could then be carried back into her work with computer graphics.

### THE COMPUTER PALETTE

Other artists have incorporated computer technology into ongoing works in other media. "I've always been an everything artist," says Arizona State art professor, Muriel Magenta, who has incorporated acrylic paintings made from computer-produced designs into a series of video tapes called *Coiffure Carnival*. "The *Coiffure Carnival* series recognizes and parodies society's collective desire to achieve ideal beauty through the ultimate hairdo," she says.

The paintings are made with a process that involves an IBM AT, output to acrylic on canvas using a 3M digital transfer process and hand brushwork. "Working with computers has been an exciting adventure—a landmark for me," Magenta told me as we sat in her computer-filled studio in Tempe, Arizona.

Magenta's video tape *Defense of a Hairdo*

contains (in addition to live actors) a 12-foot polyurethane and dynel wig hair sculpture of a "wig head" and computer paintings based on the sculpture. The colors in the paintings utilize the intense computer-based palette of vibrant pinks, purples, oranges, and blues. She sees these colors as a way of unifying the handcrafted elements of her work (such as the wig head) and the technological aspects of her work. "My work teeters back and forth between the computer, video, and spatial elements," says Magenta, who is currently working on an interactive installation that will give viewers the opportunity to

demand more entertainment in mock (video) courtroom trials.

Isaac Kerlow, a professor and founding chairman of Computer Graphics at Pratt Institute, Brooklyn, NY, has been utilizing computers in his work since the early '80s. Kerlow, whose mixed media work focuses on the interactivity that computers make possible, combined digital printing with traditional printmaking techniques as part of his interactive installation *Broken Heart*.

*Broken Heart* (or *Corazon Roto*), installed in Mexico City as part of a festival that commemo-



rated the 500th Anniversary of the Discovery of the Americas, drew parallels between the broken hearts of individual lovers and the broken hearts of warriors and nations. To produce the images for *Broken Heart*, Kerlow used simulated three-dimensional textured models of crystal hearts and human torsos. "I am not attracted to computer technology because of its capability of creating 'perfection' or 'pure' geometry," Kerlow wrote in the accompanying catalog. "My interest in computers is to generate emotional works with a 'gestural' unpolished quality to them."

To produce large-scale prints, Kerlow uses silkscreening and Scanamural, a 3M

*continued on page 266*



# Welcome to



# PARAMOUNT COMPUTER

**\$895**

## 386DX-40 System

- 386DX-40 AMD Processor
- OPTI Chipset MB w/8 Slots
- 4MB RAM
- Teac 5.25" & 3.5" Diskette Drives
- 120 IDE Hard Drive
- SVGA Card w/1MB
- 14" Color SVGA .28 DP Monitor
- Mini Tower Case w/230W P.S.
- 101-Key Keyboard
- Logitech 400 DPI Mouse

**\$945**

## 486DLC-33 System

- 486DLC-33 Processor
- 128K Cache Motherboard
- 4MB RAM
- Teac 5.25" & 3.5" Diskette Drives
- 120 IDE Hard Drive
- SVGA Card w/1MB
- 14" Color SVGA .28 DP Monitor
- Mini Tower Case w/230W P.S.
- 101-Key Keyboard
- Logitech 400 DPI Mouse

**\$1249**

**486-33**

**\$1389**

**486-50**

**\$1499**

**486-66**

## 486DX-VLB System

- 486DX Intel Processor w/ZIF Socket (Upgradable to Pentium)
- VESA Local Bus MB w/256K Cache
- 4MB RAM
- Teac 5.25" & 3.5" Diskette Drives
- 120 MB IDE Hard Drive
- Local Bus 32-Bit IDE Interface
- Vesa Local Bus Spider 24 Video Card w/Hi Color & Windows Accel.
- 14" Color SVGA .28 Monitor
- Mini Tower Case w/230W P.S.
- 101-Key Keyboard
- Logitech 400 DPI Mouse

## Affordable Prices!

## Quality Systems!

### MEMORY & CHIPS

|                                                          |  |
|----------------------------------------------------------|--|
| 1 MBx9 SIMM 60ns.....                                    |  |
| 1 MBx9 SIMM 70ns.....                                    |  |
| MBx9 SIMM 70ns.....                                      |  |
| 1 MBx36 SIMM 70ns.....                                   |  |
| 2 MBx36 SIMM 70ns.....                                   |  |
| 4 MBx36 SIMM 70ns.....                                   |  |
| Cyrix 387DX-40.....                                      |  |
| Cyrix 387DX-33/25.....                                   |  |
| Cyrix 387SX-25/20/16.....                                |  |
| Intel 80387DX-33/25.....                                 |  |
| Intel 80387SX-25/16.....                                 |  |
| CPUs & Memory...Please call for new daily updated prices |  |

### MOTHERBOARDS W/CPU

|                              |       |
|------------------------------|-------|
| 486DX-33/128K Intel VLB..... | \$365 |
| 486DX-50/128K Intel VLB..... | \$425 |
| 486DX-50/128K Intel VLB..... | \$510 |
| 486DX-66/128K Intel VLB..... | \$570 |
| 486DLC-33/128K.....          | \$155 |
| 386DX-40/128K.....           | \$122 |
| 386SX-33.....                | \$85  |

### PRINTERS

|                      |        |
|----------------------|--------|
| Canon B J-200.....   | \$330  |
| HP DeskJet 500.....  | \$305  |
| HP DeskJet 500C..... | \$685  |
| HP Laser Jet 4.....  | \$1330 |
| HP Laser Jet 4L..... | \$685  |
| Panasonic 1123.....  | \$168  |
| Panasonic 1124L..... | \$238  |

|                     |       |
|---------------------|-------|
| Panasonic 2123..... | \$218 |
| Panasonic 2180..... | \$156 |

### MONITORS

|                                |        |
|--------------------------------|--------|
| ADI4G 15" .28dp 1280x1024..... | \$425  |
| Mag 15F 15" .26dp.....         | \$497  |
| Mag 17F 17" .26dp/OEM.....     | \$     |
| Nanao 340iw.....               | \$655  |
| Nanao F550iw.....              | \$1075 |
| Nanao T560i.....               | \$1640 |
| NEC 3FGx.....                  | \$576  |
| NEC 3FGe.....                  | \$576  |
| NEC 4FGe.....                  | \$676  |
| NEC 5FG.....                   | \$1358 |
| NEC 5FGe.....                  | \$1070 |
| Sony CPD-1304.....             | \$516  |
| Sony CPD-1604.....             | \$895  |
| Sony CPD-1430.....             | \$562  |
| Sony CPD-1730.....             | \$966  |
| Viewsonic 1.....               | \$175  |
| Viewsonic 2.....               | \$235  |
| Viewsonic 4E.....              | \$270  |
| Viewsonic 5+.....              | \$365  |
| Viewsonic 5E.....              | \$355  |
| Viewsonic 6E.....              | \$296  |
| Viewsonic 7.....               | \$875  |
| Viewsonic 8.....               | \$1485 |
| Viewsonic 15.....              | \$505  |
| Viewsonic 17.....              | \$1050 |
| Viewsonic 20.....              | \$1690 |
| SVGA 14" .39dp.....            | \$198  |
| SVGA 14" .28dp.....            | \$237  |

|                                    |       |
|------------------------------------|-------|
| SVGA 14" .28dp Non-Interlaced..... | \$260 |
|------------------------------------|-------|

### HARD & FLOPPY DRIVES

|                                            |       |
|--------------------------------------------|-------|
| Conner CP30084E 80MB 18ms IDE.....         | \$150 |
| Conner CP30104 120MB 16ms IDE.....         | \$156 |
| Conner CP30204 212MB 12ms IDE.....         | \$218 |
| Conner CP30254 250MB 14ms IDE.....         | \$235 |
| Conner CP30544 540MB 12mn IDE.....         | \$599 |
| Maxtor 7213AT 213MB 15ms IDE.....          | \$210 |
| Maxtor 7245AT 245BM 15ms IDE.....          | \$250 |
| Maxtor 7345A 340MB 13ms IDE.....           | \$305 |
| Maxto MXT540 535MB 8.5ms IDE.....          | \$830 |
| Quantum ELS127 16ms 127MB IDE.....         | \$175 |
| Quantum LPS240 240MB 15ms IDE.....         | \$255 |
| Quantum LPS525AT 525MB 12ms IDE.....       | \$595 |
| Western Digital WD2200 212MB 14ms IDE..... | \$205 |
| Western Digital WD2250 250MB 14ms IDE..... | \$235 |
| Western Digital WD2340 340MB 13ms IDE..... | \$299 |
| Quantum LPS525S 525MB 13ms SCSI.....       | \$660 |
| Teac 1.2MB Floppy Drive.....               | \$53  |
| Teac 1.44MB Floppy Drive.....              | \$50  |

### VIDEO CARDS

|                                       |              |
|---------------------------------------|--------------|
| Spider 24VLB.....                     | \$95         |
| Spider 24VLB Plus.....                | \$105        |
| Spider Black Widow.....               | \$195        |
| ATI Pro 1MB/2MB(ISA).....             | \$244/ \$320 |
| ATI Pro 1MB/2MB(VLB).....             | \$256/ \$335 |
| ATI Graphics Ultra Plus 1MB/2MB.....  | \$300/ \$380 |
| ATI Graphics Ultra w/1MB & Mouse..... | \$184        |
| Cirrus Logic VLB w/1MB.....           | \$92         |
| Diamond Speedstar 24X w/Hi-Color      |              |

|                                      |       |
|--------------------------------------|-------|
| & 1MB.....                           | \$140 |
| Diamond Stealth 24VLB w/1MB.....     | \$160 |
| Diamond Stealth Pro VRAM w/2MB.....  | \$340 |
| Diamond Stealth Viper VLB w/2MB..... | \$365 |
| Orchid Fahrenheit VA801 w/Sound..... | \$142 |
| Orchid Fahrenheit VLB w/MB.....      | \$146 |
| Orchid p9000 VLB w/3MB.....          | \$340 |
| Trident 9000A w/256K.....            | \$31  |
| Trident 9000A w/512K.....            | \$38  |
| Trident 8900C/8900CL w/1MB.....      | \$58  |

### CONTROLLER CARDS

|                                          |             |
|------------------------------------------|-------------|
| IDE 2FD/2HD/2S/1P/1G.....                | \$14        |
| Promise DC-99M IDE w/512K Cache.....     | \$115       |
| Promise DC-100 IDE Cache with I/O.....   | \$125       |
| Promise DC-4030 VLB IDE Cache w/4HD..... | \$175       |
| Adaptec 1522/1522K SCSI.....             | \$98/\$138  |
| Adaptec 1542C/1542CK SCSI.....           | \$190/\$233 |
| Adaptec 2742 EISA SCSI.....              | \$380       |
| Ultrastor 24F EISA SCSI.....             | \$365       |
| Ultrastor 34F VLB SCSI.....              | \$265       |

### KEYBOARDS

|                              |      |
|------------------------------|------|
| Focus 2001.....              | \$36 |
| Keytronic 101-Key.....       | \$32 |
| Mitsumi 101-Key.....         | \$26 |
| Northgate Omnikey 101.....   | \$68 |
| Northgate Omnikey 102.....   | \$68 |
| Northgate Omnikey Ultra..... | \$92 |

### POWER SUPPLY & CASE

|                                     |       |
|-------------------------------------|-------|
| Desktop AT Case w/200W PS.....      | \$54  |
| Mini-Tower Case w/200W PS.....      | \$51  |
| Medium Tower Case w/250W PS.....    | \$82  |
| Full-Size Tower Case w/250W PS..... | \$112 |

### MODEMS

|                                                 |       |
|-------------------------------------------------|-------|
| Zoltrix 2400 Internal Modem w/send fax.....     | \$27  |
| Zoltrix 9600/2400 Internal Fax/Modem.....       | \$48  |
| Zoltrix 9600/2400 Int. Fax/Modem (Windows)..... | \$57  |
| Zoltrix 14400 Int. Fax/Modem.....               | \$148 |
| Zoltrix 14400 Ext. Fax/Modem.....               | \$173 |
| US Robotics 14400/14400 Int. Fax/Modem.....     | \$173 |
| US Robotics 14400/14400 Ext. Fax Modem.....     | \$185 |

### SOFTWARE

|                                                |       |
|------------------------------------------------|-------|
| Microsoft DOS 6.0 (w/System Purchase).....     | \$45  |
| Microsoft Excel 4.0 for Windows.....           | \$265 |
| Microsoft Word for Windows.....                | \$265 |
| Microsoft Works for Windows.....               | \$65  |
| Microsoft Windows 3.1 (w/System Purchase)..... | \$45  |
| Wordperfect 5.2 for Windows.....               | \$260 |

### TAPE BACKUP

|                                          |       |
|------------------------------------------|-------|
| Colorado DJ-10 Internal Tape Backup..... | \$138 |
| Colorado DJ-20 Internal Tape Backup..... | \$178 |
| Colorado Trakker 120MB.....              |       |
| Ext. Tape Backup.....                    | \$295 |
| Colorado Trakker 250MB.....              |       |
| Ext. Tape Backup.....                    | \$392 |
| Summit SE250 250MB Int. Tape Backup..... | \$170 |



# Call 510 680-0204

1630 Contra Costa Blvd. #D • Pleasant Hill, CA 94523 • FAX (510) 680-1013

**Hours: Mon-Fri 10 am - 6 pm  
Sat: 12 pm - 4 pm**

Prices and availability subject to change without notice. Not responsible for typographical errors. One year parts & 3 years labor on all systems.



# Multi & Media

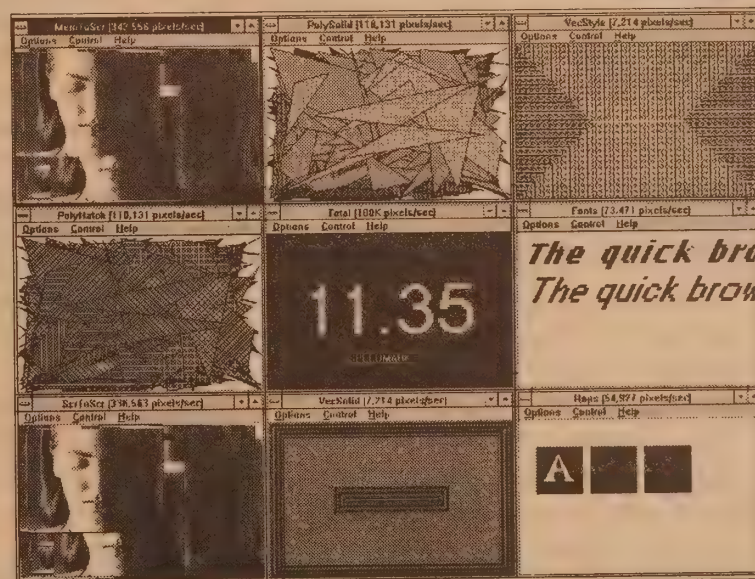
b  
e  
y  
o  
n  
d

## New Windows Video Cards

### Windows Software Continues To Push The Limits Of PC Hardware

BY RICH GRACE

The impact of Windows upon the PC platform continues to spread, pushing the development not only of new software applications, but improved hardware as well. For accelerator cards, the software tail (Windows) is clearly wagging the hardware dog—currently there are over two hundred Windows accelerator cards available. The wide variety of cards themselves are helping to push the development of new bus architectures. To discuss these new technologies and some of the impact they are having on your desktop, we will take a look at four new cards: Orchid Technology's Fahrenheit VA-VLB, STB System's PowerGraph VL-24, NDI's Volante Warp 10, and Number Nine's #9GXE.



Copyright © 1993 by Rich Grace. All rights reserved. Rich Grace is a free-lance and technical writer, and an enthusiastic user of PC, Mac, and Amiga platforms. He lives in Orange County. He can be reached on MCI Mail ID 484-6217.

#### ENTER WINDOWS

Some DOS users still believe that Windows is a waste of time. This would be an understandable view except for one major fact about the pre-Windows PC: it was slowly dying. No new hardware or software technology was appearing. Nothing was happening. It takes more than a faster chip to revive an architecture, particularly one built around the ISA bus



# MultiMedia & beyond

(Industry Standard Architecture has been the card-slot bus most PCs are built upon). The primitive PC method of handling interrupts and DMA channels was further exposed by the Macintosh and the Amiga, which both possessed superior bus architectures. MS-DOS was drifting towards the same fate as its predecessor, CP/M—obsolescence in the market.

Windows 3.0 was Microsoft's big dice throw and it is proving to be a winning combination. However, Windows also highlighted the PCs sluggish throughput and it didn't take long for video card makers and system integrators to see the writing on the wall.

The ISA bus limits the speed of throughput, regardless of the coprocessor speed on the bus. Even with the traditional accelerated video cards, users had problems achieving meaningful video speed improvement. As the software tail kept wagging the hardware dog, the question arose, "Why not extend the bus?" Theoretically, at least, you ought to be able to boost video speed and throughput even further. Thus, Local Bus was born. It's now a big hit and has injected new life into ISA.

## WHAT IS LOCAL BUS?

Essentially, VESA Local Bus (Video Electronics Standards Association, or simply, VL-Bus) is an extension to the standard 16-bit ISA, tacking on another sixteen bits to the hardware bus slot. The bus is tied directly to the clock speed of the processor, enabling controller cards for video, hard disks, and networks to, at least theoretically, outperform their ISA counterparts (which run at a maximum of 8MHz). VL-Bus systems exist for all clock speeds up to 50MHz; most vendors stick with the 33MHz design spec for their fastest systems. While there are a maximum of three slots available for a modified ISA motherboard, and most systems have only two local-bus slots installed. Many have only one!

There are other weaknesses in the VL-Bus standard, primarily involving bus-mastering conflicts, but they are beyond the scope of this article. VL-Bus' advantages are two-fold: it's simple, and it's here. Buyers waiting for Intel's competing standard, PCI, may be facing a long wait and prohibitively high costs once it appears. Right now, the market is flooded with VL-Bus products. As with most offshore clone products, many are of good quality but just

as many are not. Be careful to buy your VL-Bus motherboards, hard disk controllers, and video cards from a reputable dealer.

## IS VL-BUS WORTH IT?

Many companies have several offerings, both ISA and VL-Bus, in their catalogues. Does VL-Bus really make a difference? To begin to answer this, we'll be reviewing some Local Bus cards and comparing them to their ISA counterparts—offering some benchmarking numbers for performance comparisons.

## THE BENCHMARKS

### Ziff-Davis' WinBench

We'll be using three major benchmark programs in our assessments: Ziff-Davis' WinBench 3.11, Texas Instruments' WinTach 1.2, and Hercules' Speedy 1.1. Of the three, WinBench is the best known. It's also historically one of the most deceptive (by no fault of Ziff-Davis). Card makers have learned to tune their driver software to indicate high scores, while their real-world performance proves less impressive. WinBench exercises a dozen basic Windows drawing routines including pattern fills, polygon fills, text scrolling, and line drawing. New to the latest version are full-screen graphics drawing tests a long overdue addition to the program. The resulting score, called WinMark, is calculated in units of millions of operations. Ziff-Davis now allows other publications to report results based on WinBench 3.11 if the testing platform is thoroughly documented. That's done a bit later.

According to WinBench's programmer, Ben Myers of Spirit of Performance Inc., v3.11 largely

eliminates card makers' being able to warp their drivers' performance to yield artificially high WinMark scores. We'll be showing each card's WinMark scores for versions 3.1 and 3.11, to discover if any card makers in our survey have been playing games with their drivers. If there's a dramatic drop in scores, chances are that they've done so. A moderate decline in scores is to be expected, however.

### TI's WinTach 1.2

Texas Instruments' WinTach is quite a spectacular program. It replicates four major application packages—word processing, spreadsheet, CAD, and bitmap painting—and performs full-screen redraws, fills, and scrolling operations in all of them. While the program, by TI's account, is slanted toward cards that bear the TI34020 processor chip (entirely different from the products

## THE LATEST GUI CHIPS (At Least A Few Of Them)

Windows accelerator chips can be like alphabet soup. Here are brief descriptions of the GUI chips used on the cards in this article.

**S3 86C801**—S3's current low-end offering. It supports up to 2MB of standard DRAM (although most card makers install only 1MB on '801-based cards) and the chip is driven at speeds of up to 85MHz. It's a 32-bit chip as are all the others described here; a full 32-bit path is used to transfer data in and out of video DRAM and to the processor. 16 million colors are supported in VGA resolution.

**S3 86C805**—Very similar in all respects to the '801, its major difference is its dedicated support of VESA Local Bus.

**S3 86C928**—S3's most powerful offering, which we'll be seeing a lot more of. The '928 supports both ISA and VESA Local Bus and up to 4MB of Video RAM (VRAM). The difference between VRAM and DRAM is that VRAM supports simultaneous reads and writes, where conventional DRAM forces write cycles to wait until memory is cleared from the previous operation. This is called Dual-Port operation, and VRAM is also termed Dual-Port memory. VRAM offers a slight performance boost over DRAM, but at higher cost.

The '928 chip, however, far outperforms its DRAM-based brethren. It supports 65,536 colors in 1280 x 1024 mode, and true color in 1024 x 768 mode. Resolutions as high as 1600 x 1200 in 16-colors can be achieved for high-end imaging applications. Genlock circuitry is built into the chip to support computer video output to an NTSC (Television, in other words) monitor!

Rich Grace





BAY COMPUTER SYSTEM OF AMERICA

SERVICE &  
QUALITY  
MAKE THE  
DIFFERENCE!

### 486DX-33/50/66 Mhz 64Kcache 170 Mb HD

INTEL 486-33/50/66 DX2 CPU  
4MB RAM 70 NS (UP TO 32 MB)  
1.2 & 1.44FD  
170 MB HARD DRIVE (13MS)  
2FD/2HD IDE CONTROLLER  
2S, 1P, 1 GAME PORT  
TRIDENT 8900 (OEM) SVGA CARD W/1M  
101 ENHANCED KEYBOARD  
SVGA MONITOR (.28 DP 1024X768)  
MINI TOWER CASE W/230 WPS  
MS COMPATIBLE MOUSE

COMPLETE

\$1395/\$1529/\$1619

### VESA LOCAL BUS 486DX-33/50/66 Mhz

INTEL 486-DX CPU  
256K CACHE (up to 1MB)  
4MB RAM (70 NS UP TO 32 MB)  
1.2FD & 1.44FD  
170 MB IDE HD (15 MS)  
VL IDE CONTROLLER  
2S, 1P, 1 GAME PORT  
VL WIN ACCELERATOR CARD W/1M  
SVGA MONITOR (.28 DP 1024X768)  
101 ENHANCED KEYBOARD  
QUALITY CASE W/230 WPS  
MS COMPATIBLE MOUSE

COMPLETE

\$1469/\$1619/\$1729

### AMI Super Voyager 486-33/66 DX VESA LOCAL BUS

AMI Super Voyager VL w/256K cache  
4MB RAM  
1.2FD & 1.44FD  
VESA LB IDE CONTROLLER  
VESA LB WIN ACCELERATOR W/1M  
2S, 1P, 1 GAME PORT  
170 MB IDE HD (13 MS)  
101 ENHANCED KEYBOARD  
QUALITY CASE/230 WPS  
NON-INTERLACED SVGA MONITOR (.28DP 1024X768)  
MS COMPATIBLE MOUSE

COMPLETE

\$1795/\$2039

5 YEARS LABOR/ 1 YEAR PARTS WARRANTY ON BCSA SYSTEMS

### MULTIMEDIA

**CREATIVE LAB**  
Sound Blaster Pro Deluxe w/titles .....\$135  
Sound Blaster ASP 16 .....219  
Creative Lab Multimedia Kit .....499  
**MEDIA VISION**  
Pro Audio Spectrum 16 .....175  
Pro Audio Studio 16 .....219  
Turtle Beach .....599  
Mitsumi CD ROM DR (350 ms) .....189  
Texel DM-3024 CD DR (265 ms) .....389  
Trantor SCSI Controller .....85  
Labtec Stereo Speakers .....from 25

### CASES

Mini Tower Case w/230PS .....\$55  
Baby AT Case w/230 PS .....55  
Mid Tower w/230 PS .....79  
Big Tower w/250 PS .....105

### VIDEO OPTIONS

MGP Card .....\$17  
Trident 8900 w/1M .....69  
Tseng ET 4000 w/1M .....85  
Paradise w/1M .....89  
Paradise Win Acc w/1M .....109  
Diamond Speedstar Pro ISA/VL .....139  
Diamond Stealth 24 ISA/VL .....169  
Diamond Viper VL w/2M .....409  
ATI Ultra Pro w/1M/2M .....279/349  
VGA Card w/256K Ram .....35  
Orchid Fahrenheit w/VA w/1M .....209

### KEYBOARDS

BTC 84 .....\$29  
BTC 101 .....30  
Maxi Switch 101 .....39  
Keytronic 101 .....45  
Focus 9000 .....69  
Northgate Omni 101/102 .....75  
Chicony 101 w/Trackball .....109

### HARD DRIVES

40/80 MB HD .....\$139/179  
120 /170 MB HD .....185/209  
212/245 MB HD .....239/269  
340/500 MB HD .....329/799  
1.2 GB HD .....1069

CALL FOR OTHER  
DRIVES

### MONITORS

Samsung Synmaster 15 .....\$469  
VGA Mono .....119  
SVGA 1024x768 .28DP .....269  
SVGA NI 1024x768 .28DP .....289  
ADI 4GL .....489  
NEC 3FGe 15" .....649  
NEC 4FGe 15" .....789  
NEC 5FGe 17" .....1359  
Nanao F550i 17" .....1085  
Nanao F680iw 21" .....2299

### CONTROLLER CARDS

IDE Controller 2FD/2HD .....\$18  
IDE I/O Controller .....22  
MFM F/D 1:1 Controller .....55  
VL IDE I/O Controller .....45  
VL IDE I/O w/1MB WIN Accl .....139  
SCSI II Adaptec 1542C .....249  
SCSI II VL Ultrastor .....339  
SCSI VL Promise cache .....185

### MOTHERBOARDS

386-33SX .....\$99  
386-40DX W/128K CACHE .....149  
486-33/50/66 DX .....439/589/655  
486-33/50/66 VL  
W/256K .....469/619/685  
AIR 486-33/66 VL/EISA 512K .....442  
AMI Super Voyager VL 256 .....475

WE DO SYSTEM REPAIR & UPGRADE! CALL THE EXPERTS!

## THIS MONTH'S SPECIALS!

|                                |                                      |                                  |                    |                              |                                    |                         |                                    |
|--------------------------------|--------------------------------------|----------------------------------|--------------------|------------------------------|------------------------------------|-------------------------|------------------------------------|
| <b>HEAT<br/>SINK<br/>W/FAN</b> | <b>UNIX<br/>MOUSE W/<br/>WIN 3.1</b> | <b>14"<br/>AMBER<br/>MONITOR</b> | <b>MAG<br/>15F</b> | <b>1.2 &amp;<br/>1.44 FD</b> | <b>14.4 INT<br/>FAX/<br/>MODEM</b> | <b>101<br/>KEYBOARD</b> | <b>PRINTER<br/>AUTO<br/>SWITCH</b> |
| <b>\$15</b>                    | <b>\$59</b>                          | <b>\$105</b>                     | <b>\$529</b>       | <b>\$95</b>                  | <b>\$159</b>                       | <b>\$20</b>             | <b>\$19</b>                        |

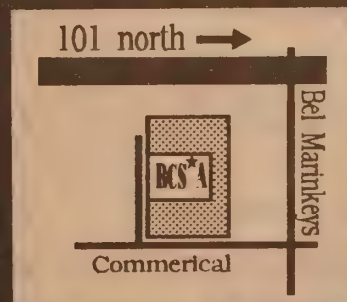
BCS\*A  
COMPUTERS

Tel: (415) 883-7392



8A Commercial Blvd Novato, CA 94949  
Hours: M-F 10:00 am-6:00pm SAT 11:00am-4:00pm

Fax: (415) 883-8104



\*Dealer Inquires Welcome • \*Volume Discount Available • \*Price subject to change w/o notice • \*Trademarks are registered by respective companies



# ADVERTISER BY CITY INDEX

For your convenience,  
here is a list of  
advertisers by county  
and city. Please see the  
advertiser index on  
page 320 for the page  
number of the  
advertisement.

## Marin/Solano County

### Cotati

Halted Specialties

### Mill Valley

Marketpro Shows

### Novato

BCSA Computers

### Petaluma

Pacific Coast Show Productions

### San Rafael

Domino Computer Self  
Service Centers  
Hi-Q Systems  
Whole Earth Access

### Vallejo

Domino Computer Self  
Service Center

## Contra Costa County

### Concord

AIM Computers  
Backyard Computer  
Domino Computer Self  
Service Centers  
Nordic Computers  
Paradine Computers  
Whole Earth Access

### El Cerrito

HD Computers  
Positive Solutions

### Lafayette

EFI's Discount Computer

### Pleasant Hill

Computown  
Paramont Computers  
R-Computer

### Richmond

Evergreen Computer

### San Ramon

Domino Computer Self  
Service Centers  
Nordic Computers

### Walnut Creek

Advance Computer  
Alpha Fine Furniture  
Computer Selection  
Compu Mart  
Systems Unlimited

## Alameda County

### Albany

PC Ten

### Berkeley

Domino Computer Self  
Service Centers  
McTek Systems  
MicroLink Data Systems  
Whole Earth Access  
Winners Circle Systems

### Dublin

Comtek Computer

### Emeryville

Microtech Int.

### Fremont

Bold Data Technology  
Deys Engineering  
Domino Computer  
ENCY Systems  
FRY's Electronics  
Gigabytes  
Golden Micro  
Herb's Software Clearance Center  
Jump Micro  
King Star Computer  
Libre Service Computer, Inc.  
Micro Distribution Center  
Microtech Int.  
New Media  
New River  
Shasta Computers  
Snap Computers  
Songtech International  
Strata Remarketing  
Swap Computer  
Sysper Technologies  
Tech Trend  
U Miracle Computer  
USM Systems  
World Net Microsystems

### Hayward

California Computer  
Cal. Tech Corp.  
Computerland of Hayward  
Cypress Computer  
Domino Computer Self  
Service Centers  
MCT, Multi Connection  
Technology  
Printer Works

### Oakland

Domino Computer  
Excel Micro Solutions  
MIS Services  
PC Professional Inc.

### Pleasanton

Comtek Computer  
Domino Computer  
Libre Service Computer, Inc.

### San Leandro

PC Ten

## Santa Clara County

### Campbell

Domino Computer Self  
Service Centers  
Fry's Electronics

### Cupertino

Cupertino Computer

### Los Altos

Domino Computer Self  
Service Centers

### Menlo Park

Alpha CD Imaging

### Milpitas

Accord Systems  
Bay Computer  
Beta Nineties Computer, Inc.  
Bozeman Marketing Group  
C.B. Memory & Computers  
Comand Line Computers  
Art Computer Tech  
Computown  
Domino Computer Self  
Service Centers  
Elpin Systems  
Hi-Tech USA  
Laitron Computer  
Legend Computer  
Microlink  
Wedge Technology

### Mt. View

Computown

### Palo Alto

Comtek Computer  
FRY's Electronics  
New River  
Palo Alto Micro  
PC Warehouse  
USM Systems

### San Jose

AMT International  
Berlin Technology  
Clarity Tech  
Comware Micro  
Compusys  
Computerwerx  
Computask  
Domino Computer Self  
Service Centers  
Golden Gate Computer  
International Microdevices  
ISC Computers  
JDR Microdevices  
Memory Source Int.  
Miracle Computers  
NCA Peripherals  
Pixel USA  
Prestige Computer  
Tower Computers  
Value Store  
Whole Earth Access  
WIT International

### Santa Clara

Access Computer  
Technologies  
ASA Computers  
Central Computer  
C & J Computer  
Cypress Computer  
Computer Express  
Comtek Computer  
Domino Computer Self  
Service Centers  
Halted Specialties  
Hitron Systems

### INS

Jemini Electronics  
MediaValue  
MicroLink Data Systems  
Proven Technology  
PSC Computing  
Saturn  
Storage Systems Engineering  
Symphony Computer  
Tanstaafl  
Technoland  
USM Systems

### Sunnyvale

ACR Systems  
Advance Computer  
American Multi Systems  
Aroma Computer  
ASP Computer Products  
Commandline Computers  
Computer Selection  
Corporate System Center  
Disk Drive Depot  
Domino Computer Self  
Service Centers  
FRY's Electronics  
Golden Valley Systems  
HD Computers  
Hi-Q Systems  
HKG Computers  
HT Electronics  
Legend Computers  
LTI Leopard Technology  
Liuski  
MP Computer  
National Semiconductor  
NCA Peripherals  
Network Associates  
PC Warehouse  
PromoX Systems  
Schwab Computer  
Top Data  
Triad Computer  
USM Systems  
Xenosys Corp.

## Santa Cruz County

### Capitola

Libre Service Computer, Inc.

## San Mateo County

### Burlingame

Computer Swap

### Daly City

Domino Computer Self  
Service Centers

### Foster City

Laitron Computers

### Millbrae

Domino Computer Self  
Service Centers

### Redwood City

Computer Selection

### San Bruno

Comtek

### San Carlos

Belmont Systems, Inc.  
Friendly Software  
Hi-Tech USA

## San Mateo

Now Computers  
Whole Earth Access

## South San Francisco

Beta Nineties Computer, Inc.  
Comet Microsystems  
Computerland of Serramonte  
Fastlink Network Products  
Universal Computer Products  
USM Systems

## San Francisco County

### San Francisco

Advance Computer  
Atman PC Computer  
Clarity Tech.  
Comart Business Systems, Inc.  
Computata  
Computer Selection  
Computown  
Control Data  
Domino Computer Self  
Service Centers  
Horizon Training  
INS  
Konicom  
Libre Service Computer, Inc.  
MicroLink Data Systems  
MPS Multi Media  
USM Systems  
Wells Fargo Bank  
Whole Earth Access

## Sacramento County/Stockton

### Sacramento

Computer Leap  
Domino Computer Self  
Service Centers  
Halted Specialties  
HD Computers  
Hi-Q Systems  
Libre Service Computer, Inc.  
Whole Earth Access

### Stockton

Hi-Q Systems

## Stantislous County

### Modeslo

Aroma Computer

## Out of State

Liuski

This index is provided as an additional service. Although we do our best to maintain accuracy, the Publisher does not assume liability for errors or omissions.



**San Francisco Office:**  
5856 Geary Blvd.  
San Francisco, CA 94121  
**Tel: (415) 751-6046**  
**or (415) 751-6048**  
**Fax: (415) 751-4586**

# Atman

## PC COMPUTER

WE DO REPAIR & UPGRADE SERVICE ON IBM & COMPATIBLE  
No Appointment Necessary, Fast Turn-around,  
Courteous Service, Experienced Technicians



歡迎參觀選購

提供國語、粵語、越南語服務

如有詢問，請電：七五一六〇四六

### IBM PC Hardware & Accessories

| Case & Power Supply                                                                            |  |  |         |
|------------------------------------------------------------------------------------------------|--|--|---------|
| Mini Tower w/230W. Power Supply                                                                |  |  | \$45.99 |
| Medium Tower w/230W. Power Supply                                                              |  |  | \$55.99 |
| Full Size Tower w/250W. Power Supply                                                           |  |  | \$55.99 |
| Baby AT Desktop w/230W. Power Supply                                                           |  |  | \$55.99 |
| Slim Line Book Case w/135W Power Supply                                                        |  |  | \$55.99 |
| Main Board & CPU                                                                               |  |  |         |
| AMD 386SX 33MHz                                                                                |  |  | \$85    |
| AMD 386DX 40MHz                                                                                |  |  | \$109   |
| Cyrix 486DLC 33MHz w/128K Cache buffer Mem.                                                    |  |  | \$139   |
| Cyrix 486DLC 40MHz w/128K Cache                                                                |  |  | \$179   |
| IBM SLC2 50MHz                                                                                 |  |  | \$239   |
| Intel 486SX 25MHz (Vesa Local Bus) w/128K Cache                                                |  |  | \$179   |
| IBM SLC2 50MHz (Vesa Local Bus) w/64K Cache                                                    |  |  | \$299   |
| IBM SLC2 66MHz (Vesa Local Bus) w/64K Cache                                                    |  |  | \$359   |
| Intel 486DX 33MHz (Vesa Local Bus) w/128K Cache                                                |  |  | \$359   |
| Intel 486DX2 66MHz (Vesa Local Bus) w/128K Cache                                               |  |  | \$559   |
| Hard Disk: Conner, Maxtor, Quantum, Western Digital & Samsung                                  |  |  |         |
| 120MB Hard Disk (15ms)                                                                         |  |  | \$159   |
| 170MB Hard Disk (15ms)                                                                         |  |  | \$179   |
| 210MB Hard Disk (14ms)                                                                         |  |  | \$199   |
| 250MB Hard Disk (14ms)                                                                         |  |  | \$209   |
| 340MB Hard Disk (13ms)                                                                         |  |  | \$299   |
| 525MB Hard Disk (10ms)                                                                         |  |  | \$555   |
| Video Cards                                                                                    |  |  |         |
| Mono (Hercules) Graphic Card w/Printer Port                                                    |  |  | \$25    |
| VGA Card w/256K RAM                                                                            |  |  | \$29    |
| Trident Super VGA Card w/1MB Ram                                                               |  |  | \$49    |
| Cirrus Logic Windows Accelerator w/1MB Ram                                                     |  |  | \$69    |
| 32-Bit Vesa Local Bus Windows & Graphic Accelerator w/1MB                                      |  |  | \$69    |
| 32-Bit Spider VL-Bus Windows Accelerator w/1MB Ram                                             |  |  | \$99    |
| 32-Bit Black Widow "Spider" w/Graphic Co-Processor & 1MB Video Ram                             |  |  | \$219   |
| 32 Bit Orchid 1280 or Diamond Stealth (VL-Bus) w/1MB Ram                                       |  |  | \$159   |
| 32 Bit Diamond Viper (VL-Bus) w/2MB Video Ram                                                  |  |  | \$399   |
| Monitors                                                                                       |  |  |         |
| 14" Flat Screen Amber Mono Monitor                                                             |  |  | \$99    |
| 14" Multi Scan Super VGA Color Monitor (.39)                                                   |  |  | \$199   |
| 14" Multi Scan Super VGA Color Monitor (.28)                                                   |  |  | \$229   |
| 14" Multi Scan Super VGA Color Monitor (.28, NI)                                               |  |  | \$249   |
| 15" Flat Screen Super VGA Color Monitor (.28, 72Hz NI)                                         |  |  | \$359   |
| 14" ADI 3GL Low Radiation SVGA Color Monitor (.28, Digital Control)                            |  |  | \$350   |
| 15" ADI 4A Flat Screen Super VGA Color Monitor (.28, Digital Control)                          |  |  | \$415   |
| Keyboards                                                                                      |  |  |         |
| 101 Keys Enhanced Keyboard                                                                     |  |  | \$19    |
| 101 "Click" Keys Enhanced Keyboard                                                             |  |  | \$25    |
| Honeywell 101 Keys Enhanced Keyboard                                                           |  |  | \$35    |
| Max Switch 101 Keys Enhanced Keyboard                                                          |  |  | \$35    |
| Keytronic 101 Keys Enhanced Keyboard                                                           |  |  | \$29    |
| Controllers                                                                                    |  |  |         |
| 16 Bit IDE Floppy/Hard Disk Controller w/2S, 1P, 1G Ports                                      |  |  | \$13    |
| 32 Bit IDE Floppy/Hard Disk Controller w/2S, 1P, 1G Ports (VL-Bus)                             |  |  | \$39    |
| 32 Bit IDE Caching Controller (0.3ms Hard Disk Access Time, 7MB/Sec)                           |  |  | \$169   |
| Modems                                                                                         |  |  |         |
| Zoltrix 2400 Data w/9600 Send Fax Internal Modem                                               |  |  | \$29    |
| Zoltrix 2400/9600 Send & Receive Fax Internal Modem with Bit Fax for Windows Software included |  |  | \$49    |
| Zoltrix 14,400/14,400 Send & Receive Fax Internal Modem                                        |  |  | \$144   |
| Tape Backups                                                                                   |  |  |         |
| Archive 250MB Tape Backup w/Tape                                                               |  |  | \$169   |
| Colorado 250MB Tape Backup w/Tape                                                              |  |  | \$189   |
| Archive Viper 525MB SCSI Tape Backup w/Adaptec SCSI Controller                                 |  |  | \$799   |

### 300 MORE TITLES FOR SELECTION:

Shareware, Multimedia Presentation, Clip Art, Applications, Business, Games, Music, Education, & Adult Etc...

**CD RENTAL AVAILABLE AT JUST \$5 A WEEK**  
We guarantee lowest prices!



# MONSTER SALE

## \$1199

### The Complete Multimedia System

486DX 33MHz For a Great Price!!  
& The Fastest \*Quantum 170MB\* Hard Disk  
Plus Bundled with 5 CD Deluxe Titles  
Everything you need is on CD's!

#### System Configuration:

- Mini Tower Case w/230W Power Supply
- Forex 486DX 33MHz Main Board
- Cyrix 486DLC 22MHz CPU
- 128MB External Cache Memory Built-in
- 4MB SIMM Main Memory Installed
- IDE Controller w/2FD & 2HD
- 2 Serial, 1 Parallel, 1 Game Ports
- 1.2MB Floppy Drive
- 1.44MB Floppy Drive
- Quantum 170MB Hard Disk (15ms Access Time)
- 1MB SUPER VGA Enhanced Color Graphic Card
- 14" Multiscan SVGA Color Monitor (.28 Dot, 1024x768 Res.)

#### The Complete Multimedia System Includes:

- Sound Wonder Dynamic Sound Card
- MPC Photo CD ROM Drive by Mitsumi (350ms Fast Access, 150kb/Sec. Made in Japan)
- A Pair of Shielded Stereo Speakers
- Dynamic Microphone, Audio, Inputs, MIDI Interface built-in
- Complete Manual & Software Driver

#### The Toolworks 5 CD Titles Include:

- 1) Grolier's New Encyclopedia By Toolworks
- 2) Mavis Beacon's Typing Tutor (Multimedia Sound Version)
- 3) US Atlas for Windows
- 4) World Atlas for Windows
- 5) Chess Master 3000

**Bring Home this New Exciting Multimedia System and Cheer Up Your Whole Family!!!**  
**Super Price While Supplies Last...**

| System                                            | Main Board & CPU | Bare System | System:<br>• 4MB RAM<br>• 1.2 or 1.44MB Floppy Drive<br>• 120MB Hard Disk<br>• 1MB Super VGA Card<br>• 14" SVGA Color Monitor | System:<br>• 4MB RAM<br>• 1.2 and 1.44MB Floppy Drive<br>• 120MB Hard Disk (15ms)<br>• 1MB Super VGA Card<br>• 14" SVGA Color Monitor (.28) | System:<br>• 4MB RAM<br>• 1.2 and 1.44MB Floppy Drive<br>• 170MB Hard Disk (15ms)<br>• 1MB Super VGA Card<br>• 14" SVGA Color Monitor (.28) | System:<br>• 4MB RAM<br>• 1.2 and 1.44MB Floppy Drive<br>• 250MB Hard Disk (14ms)<br>• 1MB Super VGA Card<br>• 14" SVGA Color Monitor (.28) | System:<br>• 4MB RAM<br>• 1.2 and 1.44MB Floppy Drive<br>• 340MB Hard Disk (13ms)<br>• 1MB Super VGA Card<br>• 14" SVGA Color Monitor (.28) |
|---------------------------------------------------|------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 386SX-33MHz                                       | \$85             | \$222       | \$749                                                                                                                         | \$833                                                                                                                                       | \$859                                                                                                                                       | \$888                                                                                                                                       | \$966                                                                                                                                       |
| 386DX-40MHz                                       | 105              | 244         | 777                                                                                                                           | 850                                                                                                                                         | 888                                                                                                                                         | 899                                                                                                                                         | 999                                                                                                                                         |
| Cyrix 486DLC-33MHz w/128KB Cache                  | 139              | 277         | 799                                                                                                                           | 888                                                                                                                                         | 900                                                                                                                                         | 919                                                                                                                                         | 1029                                                                                                                                        |
| IBM SLC2-50MHz                                    | 239              | 359         | 899                                                                                                                           | 965                                                                                                                                         | 999                                                                                                                                         | 1055                                                                                                                                        | 1144                                                                                                                                        |
| IBM SLC2-50MHz w/64KB Cache (Vesa Local Bus)      | 299              | 429         | 966                                                                                                                           | 1029                                                                                                                                        | 1055                                                                                                                                        | 1111                                                                                                                                        | 1099                                                                                                                                        |
| IBM SLC2-66MHz w/64KB Cache (Vesa Local Bus)      | 355              | 499         | 1029                                                                                                                          | 1099                                                                                                                                        | 1111                                                                                                                                        | 1177                                                                                                                                        | 1299                                                                                                                                        |
| Intel 486SX-25MHz w/128KB Cache (Vesa Local Bus)  | 189              | 299         | 849                                                                                                                           | 899                                                                                                                                         | 939                                                                                                                                         | 949                                                                                                                                         | 1099                                                                                                                                        |
| Intel 486DX-33MHz w/128KB Cache (Vesa Local Bus)  | 365              | 499         | 1022                                                                                                                          | 1099                                                                                                                                        | 1111                                                                                                                                        | 1133                                                                                                                                        | 1221                                                                                                                                        |
| Intel 486DX2-66MHz w/128KB Cache (Vesa Local Bus) | \$555            | 699         | 1222                                                                                                                          | 1299                                                                                                                                        | 1333                                                                                                                                        | 1333                                                                                                                                        | 1499                                                                                                                                        |

Bare System Includes: Mini Tower Case w/230W Power Supply, 1.2MB or 1.44MB Floppy Drive, 16-Bit IDE Controller, 2 Serial/1 Parallel/1 Game Ports, 101 Keys Enhanced Keyboard

**Atman Systems Corp.**

1 year warranty on parts & labor. Walk-in service within 1 hour.  
Cash prices reflected. Prices subject to change without notice.  
Not responsible for typographical errors.

### Big Sale ★ CD Titles

|                                            |       |                                        |       |
|--------------------------------------------|-------|----------------------------------------|-------|
| Adventures of Willy Beamish.....           | \$19  | Lotus 1-2-3 For Windows...75           |       |
| American Business Phone Book...19          |       | MacMillan Dictionary for Children..... | 19    |
| Animals! San Diego Zoo Presents (MPC)..... | 13.50 | Mayo Health Clinic.....                | 19    |
| Arthur's Teacher Trouble.....              | 19    | Microsoft Bookshelf.....               | 39    |
| Barney Bear Goes to Space.....             | 19    | MIDI Music Shop.....                   | 16    |
| Beauty and the Beast.....                  | 15    | Mixed Up Mother Goose by SIERRA.....   | 19    |
| Holy Bible.....                            | 12.50 | Monkey Island Adventure.....           | 19    |
| Business & Economic Atlas.....             | 19    | National Parks.....                    | 19    |
| Carmen San Diego Deluxe.....               | 21    | Night Owl 9.....                       | 29    |
| Clip Art Goliath.....                      | 12.50 | North American FAX Book.....           | 29    |
| Colossal Cookbook.....                     | 12.50 | PC-Sig 12th Edition.....               | 25    |
| Compton's Encyclopedia w/ Manual.....      | 49    | Playing with Eng/Spa/Fre/ Ger/Jap..... | 23    |
| Deathstar Arcade Battles.....              | 12.50 | Publish It 2.0.....                    | 19    |
| Desktop Publisher's Dream Disk & Book..... | 32    | Publisher's Paradise.....              | 24    |
| Dictionary & Languages.....                | 12.50 | Secret Weapons of Luftwaffe.....       | 19    |
| Dictionary of the Living World.....        | 27    | Shareware Overload!.....               | 12.50 |
| Dinosaur Adventure.....                    | 20    | Sherlock Holmes-Cons. Det.....         | 16    |
| Encyclopedia of Clip Art.....              | 24    | Sound Sensations!.....                 | 12.50 |
| Family Choice/Britannica.....              | 19    | Space Quest IV by SIERRA.....          | 19    |
| Family Doctor.....                         | 19    | Sports Best (3 in 1).....              | 19    |
| Family Education Collection.....           | 19    | TechnoTools.....                       | 12.50 |
| Great Cities of the World-VOL #1 or 2..... | 19    | Time Table of History.....             | 16    |
| Guinness Disc of Records.....              | 15    | Too Many Typefonts!.....               | 12.50 |
| House of Games.....                        | 24    | Toolworks Reference Library.....       | 19    |
| Jones in the Fast Lane by SIERRA.....      | 19    | Toolworks Grolier's Encyclopedia.....  | 35    |
| King's Quest V by SIERRA.....              | 19    | US Atlas & Auto Map.....               | 19    |
| KODAK Photo CD Access w/ Samples.....      | 13.50 | Windowware.....                        | 12.50 |
| Loom.....                                  | 19    | Wing Commander & Ult VI.....           | 12.50 |
|                                            |       | Wiz-Pak 6-Pak CD-ROM.....              | 9.99  |

#### Adult Titles:

(Half-Price Special of the Month)

|                                         |              |                                                                                                                                                                                                                                                                                  |  |
|-----------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Adult Reference Library.....            | Special \$19 | New Release!!                                                                                                                                                                                                                                                                    |  |
| Basty Babes NEW Revised.....            | Special \$19 | The Interactive Adventures of Seymour Butts CD:                                                                                                                                                                                                                                  |  |
| Hot Pix 5 or Storm                      |              | A 100 minutes of Full Length, Full Motion with Quality Sound interactive Video. Join Seymour and his camera as you help him explore his neighborhood and meet and mate with the girl of his dreams. AS SEEN ON TV!! Featured on Phil Donahue, CNN, Hard Copy, Joan Rivers Show!! |  |
| I or II or III.....                     | Special \$19 | VIRTUAL REALITY...IN STOCK...                                                                                                                                                                                                                                                    |  |
| Adult Plate (Windows ver).....          | Special \$25 | At the Best Price!                                                                                                                                                                                                                                                               |  |
| Asian Ladies.....                       | Special \$29 |                                                                                                                                                                                                                                                                                  |  |
| After Dark Trilogy (3 movies in 1)..... | Special \$34 |                                                                                                                                                                                                                                                                                  |  |
| Deep Throat (Movies Classic).....       | Special \$37 |                                                                                                                                                                                                                                                                                  |  |
| Digital Dancing (Strip Games).....      | Special \$37 |                                                                                                                                                                                                                                                                                  |  |
| New!! Adult Titles Sample CD.....       | Special \$10 |                                                                                                                                                                                                                                                                                  |  |

### Multimedia: Sound Cards, CD ROMS & Speakers...

| Sound Cards:                                                                                                                                                                                                                                                                                                                                         |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Sound Wonder (Sound Blaster 2.0) w/Free plug-in head phones & 2 action games                                                                                                                                                                                                                                                                         | \$48.99  |
| Logitech SoundMan 16                                                                                                                                                                                                                                                                                                                                 | \$99.99  |
| Sound Blaster Pro Deluxe                                                                                                                                                                                                                                                                                                                             | \$119    |
| Sound Blaster 16 ASP                                                                                                                                                                                                                                                                                                                                 | \$199.99 |
| Pro Audio Spectrum 16 (Media Vision)                                                                                                                                                                                                                                                                                                                 | \$139    |
| CD ROM Drives                                                                                                                                                                                                                                                                                                                                        |          |
| Mitsumi Photo CD ROM Drive (350ms, 150kb/Sec)                                                                                                                                                                                                                                                                                                        | \$177    |
| Texel CD ROM Drive (SCSI-2 Interface)                                                                                                                                                                                                                                                                                                                | \$339    |
| Toshiba CD ROM Drive (200ms, 300kb/Sec)                                                                                                                                                                                                                                                                                                              | \$399    |
| Transtor SCSI-2 Interface Card for SCSI CD ROM Drive                                                                                                                                                                                                                                                                                                 | \$69.99  |
| Speakers                                                                                                                                                                                                                                                                                                                                             |          |
| Labtec Stereo Speaker (A pair of left & right)                                                                                                                                                                                                                                                                                                       | \$14.99  |
| Zoltrix Magnetic shielded speakers                                                                                                                                                                                                                                                                                                                   | \$8.99   |
| Multimedia Starter Kit                                                                                                                                                                                                                                                                                                                               |          |
| • Zoltrix Pro Audio Sound card<br>• Cable & Software Driver (Sound Blaster 2.0 Compatible)<br>• MPC Photo CD ROM Drive by Mitsumi (350 ms Fast Access, Made in Japan)<br>• Complete with installation manual<br>A pair of shielded stereo speakers<br>Plus Bonus:<br>1. Kodak Photo CD Access CD Titles                                              | \$239    |
| Multimedia Deluxe Kit                                                                                                                                                                                                                                                                                                                                |          |
| • Pro Audio Spectrum 16 Bit Stereo Sound Card By Media Vision<br>• Toshiba CD ROM Drive (SCSI-2)<br>• "Double Speed" (205ms Access Time, 300kb/Sec)<br>• Featuring: Photo XA Multisessions<br>• Complete w/installation manual<br>Cable & Software Driver<br>A pair of shielded stereo speakers<br>Plus Bonus:<br>1. Kodak Photo CD Access CD Titles | \$539    |

**HOURS:**  
M-F 10am-6pm  
Saturday 11 am-5pm

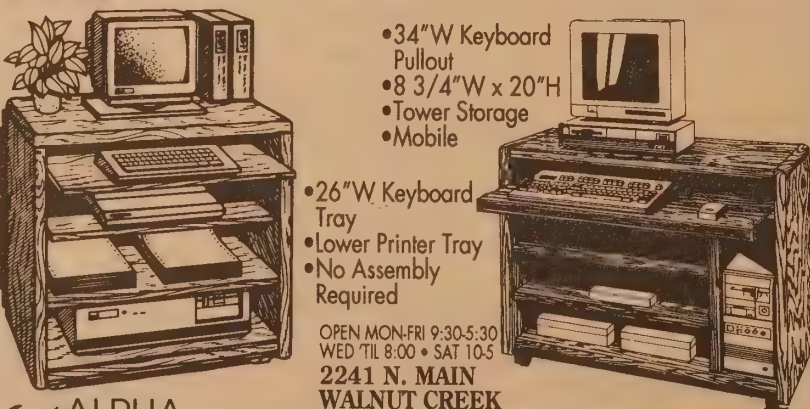




# ADVERTISERS INDEX

|                                          |                                       |                                       |
|------------------------------------------|---------------------------------------|---------------------------------------|
| ACCESS COMPUTER TECHNOLOGIES.....134-149 | COMPUTERLAND OF SERRAMONTE.....30,31  | NCA PERIPHERALS.....201-223           |
| ACCORD SYSTEMS.....35                    | COMPUTOWN.....40-43                   | NETWORK ASSOCIATES CORP.....241       |
| ACR SYSTEMS.....226,227                  | COMTEK COMPUTERS.....307              | NETWORK INNOVATIONS.....133           |
| ADVANCE COMPUTER SYSTEMS.....4,5         | COMWARE TECHNOLOGY.....267            | NEW MEDIA.....85                      |
| AIM COMPUTERS.....106                    | CONTROL DATA SYSTEMS, INC.....64      | NEW RIVER.....230,231                 |
| ALPHA CD IMAGING.....244                 | CORPORATE SYSTEMS CENTER.....28       | NORDIC COMPUTERS.....321              |
| ALPHA FINE COMPUTER FURNITURE.....320    | CUPERTINO COMPUTER.....12             | NOW ELECTRONICS.....242,243           |
| AMERICAL GROUP.....312                   | CYPRESS COMPUTERS.....155             | PALO ALTO MICRO.....93                |
| AMERICAN MULTI SYSTEMS.....7             | DEYS ENGINEERING.....288              | PARADINE COMPUTER SYSTEMS.....310,311 |
| AMT INTERNATIONAL.....100,101            | DISK DRIVE DEPOT.....3                | PARMONT COMPUTERS.....314             |
| AROMA TECH., INC.....110,111             | DOMINO COMPUTER.....11                | PC EXPRESS.....234                    |
| ART COMPUTER, INC.....102                | EFI'S DISCOUNT COMPUTER.....80        | PC PROFESSIONAL, INC.....196          |
| ASA COMPUTERS.....97-99                  | ELPIN SYSTEMS, INC.....51             | PC TEN.....150                        |
| ASP COMPUTER PRODUCTS.....10             | ENCY SYSTEMS.....48                   | PC WAREHOUSE.....113                  |
| ATMAN PC COMPUTER.....319                | EVERGREEN COMPUTER INT'L.....284-286  | PIXEL USA COMPUTER.....194,195        |
| AUTHORIZED TECHNICAL SERVICES.....238    | EXCEL MICRO SOLUTIONS.....282         | POSITIVE SOLUTIONS CORP.....33        |
| BACKYARD COMPUTER SERVICES.....244       | FRED HANEY COMPUTERS.....60           | PRESTIGE COMPUTER.....236,237         |
| BAY COMPUTER.....289                     | FRIENDLY SOFTWARE.....299             | PRINTER WORKS.....47                  |
| BCSA COMPUTERS.....317                   | FRY'S ELECTRONICS.....2, 161-191, 323 | PROMOX SYSTEMS.....259                |
| BELMONT SYSTEMS, INC.....104,105         | GIGABYTES.....10, 50                  | QUALITY COMPUTER.....64               |
| BERLIN TECHNOLOGY.....132                | GOLDEN MICRO COMPUTER.....61          | QUARTERDECK OFFICE SYSTEMS.....324    |
| BETA NINETIES COMPUTER.....19            | GOLDEN VALLEY SYSTEMS.....67          | R-COMPUTER.....153                    |
| BOLD DATA TECHNOLOGY.....89              | H D SYSTEMS.....250-253               | RT COMPUTER.....303                   |
| BOZEMAN MARKETING GROUP, INC.....26      | HALTED SPECIALTIES.....92             | SATURN TECHNOLOGY, INC.....200        |
| C.B. MEMORY & COMPUTERS.....46           | HI-TECH USA.....268,269               | SCHWAB COMPUTER CENTER.....108        |
| C.G.I. TECHNOLOGY.....62                 | HIQUALITY SYSTEMS, INC.....72-74, 309 | SEYBOLD SEMINARS.....292              |
| CAL TECH CORP.....283                    | HITRON SYSTEMS.....228,229            | SHASTA COMPUTERS.....56,57            |
| CALIFORNIA COMPUTER COMPANY.....197      | HKG COMPUTERS.....121                 | SNAP COMPUTERS.....80                 |
| CENTRAL COMPUTER SYSTEMS.....246-249     | HT ELECTRONICS.....305                | SONGTECH INTERNATIONAL, INC.....198   |
| CERTIFIED NETWORK EDUCATORS.....234      | INPUT AUTOMATION.....240              | STORAGE SYSTEMS ENGINEERING.....18    |
| CLARITY TECHNOLOGIES.....70              | INTERNATIONAL MICRO DEVICES.....12    | STRATA REMARKETING.....244            |
| COMART BUSINESS SYSTEMS.....8            | ISC COMPUTERS.....119                 | SUN USER GROUP EXPO.....304           |
| COMET MICRO SYSTEMS.....109              | J & K TECHNOLOGIES.....50             | SUNAR SYSTEMS.....35                  |
| COMMAND LINE COMPUTER.....21             | JDR MICRODEVICES.....22               | SYMPHONY COMPUTER.....290             |
| COMPU DATA.....87                        | JEMINI ELECTRONICS.....294,295        | SYSPER TECHNOLOGY.....257             |
| COMPUCARE.....125                        | JUMP MICROSYSTEMS.....37              | SYSTEMS UNLIMITED.....68              |
| COMPUMART.....34                         | KINGSTAR COMPUTER.....9               | TANSTAAFL MANUFACTURING, INC.....65   |
| COMPUTASK.....199                        | KONICOM.....296                       | TECH TREND, INC.....27                |
| COMPUTER EXPRESS.....107                 | LAITRON COMPUTER.....114,115          | TECHNOLAND.....193                    |
| COMPUTER SELECTION.....69                | LEGEND COMPUTER.....77                | THE SUPER LINK.....59                 |
| COMPUTER SWAP.....20                     | LIBRE SERVICES COMPUTER, INC.....45   | TOP DATA.....235                      |
| COMPUTER WERX.....25                     | LIUSKI INTERNATIONAL.....224          | TOWER COMPUTER.....263                |
| COMPUTERLAND OF HAYWARD.....71           | LTI LEOPARD TECHNOLOGIES.....129      | TRIAD COMPUTER.....127                |
|                                          | M.A.C.....90                          | UMIRACLE MICROSYSTEMS.....156, 157    |
|                                          | MARKET PRO.....262                    | UNITED SOLUTIONS.....55               |
|                                          | MCTEK SYSTEMS.....233                 | UNIVERSAL COMPUTER PRODUCTS.....261   |
|                                          | MEDIA VALUE.....63                    | USM DISTRIBUTORS.....264,265          |
|                                          | MICRO DISTRIBUTION CENTER.....103     | VALUE STORE.....88                    |
|                                          | MICRO LINK.....93                     | VASTER ELECTRONICS CORP.....200       |
|                                          | MICROLINK DATA SYSTEMS.....14-16      | WEDGE TECHNOLOGY.....131              |
|                                          | MICROTECH INTERNATIONAL.....116,117   | WELLS FARGO BANK.....54               |
|                                          | MIRACLE COMPUTER.....81               | WHOLE EARTH ACCESS.....78,79          |
|                                          | MIS SERVICES.....36                   | WINNER'S CIRCLE.....53                |
|                                          | MONARCH COMPUTERS.....192             | WIT INTERNATIONAL.....95              |
|                                          | MP COMPUTER.....13                    | WORLD-NET MICROSYSTEMS.....254,255    |
|                                          | MPS MULTIMEDIA.....39                 | XENOSYS.....96                        |
|                                          | MCT, MULTI CHANNEL TECHNOLOGY.....158 | YOKOHAMA TELECOM CORPORATION.....232  |
|                                          | MULTI MICRO SYSTEMS.....123           |                                       |
|                                          | MULTIMEDIA EXPO '93.....301           |                                       |
|                                          | NATIONAL SEMICONDUCTOR.....62         |                                       |

**WE'VE GOT IT ALL!**



- 34" W Keyboard Pullout
- 8 3/4" W x 20" H
- Tower Storage
- Mobile
- 26" W Keyboard Tray
- Lower Printer Tray
- No Assembly Required

OPEN MON-FRI 9:30-5:30  
WED THU 8:00 • SAT 10-5  
2241 N. MAIN  
WALNUT CREEK  
**(510) 930-0277 • (800) 974-0277**

**ALPHA**  
FINE COMPUTER FURNITURE

This index is provided as an additional service. Although we do our best to maintain accuracy, the publisher does not assume liability for errors or omissions.





**Lifetime  
In-Store Labor  
Warranty  
1 Year Warranty  
On Parts**

THOUSANDS OF SATISFIED CUSTOMERS SAY,  
**"GO SEE NORDIC"**  
 OVER 18,100 SYSTEMS SOLD!

**NORDIC  
COMPUTERS**

**GREAT PRICE**

**486DX2-66  
VESA LOCAL BUS  
SYSTEM**  
 w/Hard Drive  
 & Super VGA Monitor

486DX2-66, 2VLB Slots  
 4 MB RAM, 70ns  
 ISA Hard Drive & Controller  
 Viewsonic 4E SVGA Monitor (.28dp)  
 Teac 1.2 & 1.44 Floppy Drives  
 2 Serial, 1 Parallel Port  
 Maxiswitch or Keytronic Keyboard  
 Medium Tower Case  
 DOS 6.0 w/Manual  
 Lifetime Labor Warranty, 1 yr. parts

|               |               |               |
|---------------|---------------|---------------|
| SVGA<br>170MB | SVGA<br>245MB | SVGA<br>345MB |
| <b>\$1789</b> | <b>\$1849</b> | <b>\$1919</b> |

**GREAT PRICE**

**MULTIMEDIA  
VESA LOCAL BUS  
SYSTEM**  
 w/Hard Drive  
 & Super VGA Monitor

486-33DX, 2 VLB Slots  
 Same as 486-33 Configuration  
**PLUS**  
 Texel CD-ROM, 256ms  
 Viewsonic 15 SVGA Monitor (.28 dp)  
 Genoa VESA Video Card  
 Sound Card, Speakers  
 3-button Mouse  
 Medium Tower Case  
 •OPTION WIN-TV \$599 ADDITIONAL  
 Upgrade to 486DX2-66.....\$249

|               |               |               |
|---------------|---------------|---------------|
| SVGA<br>170MB | SVGA<br>245MB | SVGA<br>345MB |
| <b>\$2429</b> | <b>\$2529</b> | <b>\$2599</b> |

**Back To School  
SPECIAL**

**COMPLETE SYSTEM  
WITH SHAREWARE  
386SX-33**

2MB RAM  
 80MB Hard Drive  
 IDE Hard Drive & Controller  
 VGA Monitor  
 Teac 1.44 Floppy Drive  
 2 Serial/ 1 Parallel/ 1 Game Port  
 101 Enhanced Keyboard  
 Desktop Case  
 DOS 6.0 with Manual  
 Lifetime Labor Warranty, 1 yr. parts

**\$799**

**Software**  
 •Shareware Included  
 •Word Processing  
 •Spreadsheet  
 •DOS Tutor  
 •And Game of your choice from our library

**CUSTOM CONFIGURATIONS AVAILABLE — CALL FOR QUOTES**

**486-50 System**  
 VESA LOCAL BUS

486-50DX 2VLB Slots  
 4 MB RAM, 70ns  
 IDE Hard Drive & Controller  
 Viewsonic 4E SVGA Monitor  
 Teac 1.2 & 1.44 Floppy Drives  
 2 Serial/1 Parallel Port  
 Maxiswitch or Keytronic KD  
 Medium Tower Case  
 DOS 6.0 with manual  
 Lifetime Labor Warranty  
 1 yr. parts

|               |               |               |
|---------------|---------------|---------------|
| SVGA<br>170MB | SVGA<br>245MB | SVGA<br>345MB |
| <b>\$1719</b> | <b>\$1779</b> | <b>\$1849</b> |

**486-33 System**  
 VESA LOCAL BUS

486-33DX 2VLB Slots  
 4 MB RAM, 70ns  
 IDE Hard Drive  
 Viewsonic 4E SVGA Monitor  
 Teac 1.2 & 1.44 Floppy Drives  
 2 Serial/1 Parallel Port  
 Enhanced Keyboard  
 DOS 6.0 with manual  
 Lifetime Labor Warranty  
 1 yr. parts

|               |               |               |
|---------------|---------------|---------------|
| SVGA<br>170MB | SVGA<br>245MB | SVGA<br>345MB |
| <b>\$1525</b> | <b>\$1599</b> | <b>\$1669</b> |

**386-40 System**  
 w/Hard Drive & Monitor

40MHz (Upgradable Board)  
 Noise Killer  
 4 MB RAM, 70ns  
 IDE Hard Drive  
 Super VGA Monitor  
 Teac 1.2 & 1.44 MB Drives  
 2 Serial/1 Parallel Port  
 Enhanced Keyboard  
 DOS 6.0 with manual  
 Lifetime Labor Warranty  
 1 yr. parts

|               |               |               |
|---------------|---------------|---------------|
| MVGA<br>40MB  | SVGA<br>80MB  | SVGA<br>170MB |
| <b>\$1019</b> | <b>\$1219</b> | <b>\$1249</b> |

**System Add-Ons**

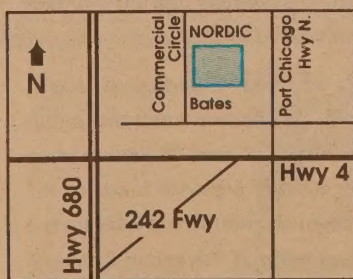
|                                |           |
|--------------------------------|-----------|
| 2400 Modem .....               | \$29      |
| 14.4/14.4 Fax/Modem .....      | \$159     |
| Logitech MouseMan .....        | \$69      |
| Additional Memory, per MB..... | CALL      |
| 1.2 Floppy/1.44 Floppy .....   | \$57/47   |
| CPU Cooling Kit .....          | \$17      |
| Zoltrix Audio Pack .....       | \$68      |
| Texel CD-ROM, 265ms .....      | \$439     |
| Lithium Battery .....          | \$10      |
| Noise Killer .....             | SALE \$39 |

**System Upgrades**

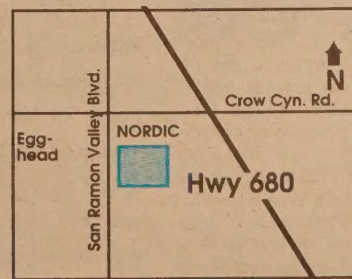
|                             |       |
|-----------------------------|-------|
| 386-40DX Upgrade Kit .....  | \$465 |
| 486-33DX Upgrade Kit .....  | \$789 |
| 486DX2-66 Upgrade Kit ..... | \$995 |

*Kits include: VESA Motherboard, CPU & 4MB of Memory (Installation extra)*

**NORDIC COMPUTERS  
CONCORD**  
 5060 COMMERCIAL CIRCLE, UNIT A  
 CONCORD, CA 94520  
**(510) 687-3050**  
 M-F 10:00-6:00 • Open Sat. 10:00-4:00



**NORDIC COMPUTERS  
SAN RAMON**  
 2438 SAN RAMON VALLEY BLVD.  
 SAN RAMON, CA 94583  
**(510) 743-9390**  
 M-F 10:00-6:00 • Open Sat. 10:00-4:00



Prices subject to change without notice. Dealer inquiries welcome.





# NET-lore Or

## Weird Documents And Odd Humor On The Internet

BY JOHN C.  
DVORAK

**A**nyone who has been lucky enough to take a college class in folklore will appreciate the fact that folklore has adapted to the Internet. Collectors of odd humor—the kind, so pervasive in the modern office, that's constantly Xeroxed and passed around—will be relieved to know that the electronic form of folklore has finally arrived.

NET-lore is here. Currently it takes the form of fake documents, the most famous of which is the Microsoft "Food for Windows" history, which I've personally received five times. To give you an idea of what NET-lore is like, here's the "Food for Windows" posting. This version goes back to April of 1993; it may have changes from an unknown original, just like those office cartoons that keep getting redrawn. Subsequent versions, of this posting all have minor changes.

*This version is right off the Internet. Nobody*

### DVORAK'S LAST COLUMN

*has been able to find the author of this document (most folklore is anonymous). But we're still looking.*

**Monday, 10 AM** — Chicago, Illinois, Cuisine International announced CUISINENET, the first internetworking program to seamlessly integrate word and food processing, called a breakthrough for small restaurants and snack bars. Cuisine Chairman Mark Meigs confidently predicted sales of thousands of copies with shipments soon to begin.

**Monday, 4 PM** — New York—Cuisine International shares closed sharply higher on announcement of new CUISINENET product.

**Tuesday, 9 AM** — Redmond, Washington—Microsoft Chairman William H. Gates, III announced that Microsoft Food for Windows would soon enter beta testing. Gates described the product as the first of a projected family of products to include Food for Windows, designed for small commercial dining establishments; Personal Food for Windows, designed for home kitchens; Portable Food for Windows, designed for lunchboxes; and, of course, at the high end, Food for Windows NC (Nouvelle Cuisine), designed for large institutional dining rooms. Asked by a reporter about CUISINENET, Gates said that he had never heard of the product, but was not surprised by it, because the software business is highly competitive, and Microsoft has to compete on the merits with many strong competitors, as the FTC had recently concluded.

**Tuesday, 3 PM** — Chicago, Illinois—An angry Mark Meigs showed reporters a copy of the nondisclosure agreement signed by Bill Gates, under which Cuisine International had informed Microsoft a year earlier about plans for CUISINENET. Meigs said that in hindsight, he should never have signed the agreement, as the only thing he learned from Microsoft was that Gates was considering making changes to Windows.

**Wednesday, 9 AM** — Redmond, Washington—Microsoft Chairman Bill Gates announced that Microsoft would soon publish specifications for the Windows Open Kitchen Architecture (WOKA), a series of design specifications to permit manufacturers of toasters, ranges, and other kitchen appliances to integrate their products into the forthcoming Microsoft Food for Windows line. Asked about reports of a nondisclosure

agreement with Cuisine International for a similar product, Gates said that the other prod-

uct was really at most a niche product, and would probably have less functionality than the food-related features that Microsoft would be building into the new Unsaturated FAT File System which would be part of DOS 7.0. Gates said that he doubted there would be much interest in a dead-end solution that would not be able to keep up to date with advances in WOKA. Gates added that over 11,000 manufacturers of kitchen appliances were already having serious discussions with Microsoft about WOKA, and that he expected almost all important eaters of food to standardize on the WOKA environment.

**Wednesday, 10 AM** — Redmond, Washington—Microsoft Chairman Bill Gates announced that he would be giving the keynote speech at the American Bakers annual convention on "Nutrition at Your Fingertips." Gates played down speculation that he would use the Bakers convention to introduce Microsoft Food for Windows, saying only that alpha testing was proceeding ahead of schedule, and the product would be shipped when it was ready.

**Wednesday, 11 AM** — Redmond, Washington—Microsoft Corporation announced that its chairman, William H. Gates, III, had made a donation of over \$250 of personal funds to the Cordon Bleu to begin an endowment fund for the Bill Gates Professorship of Advanced Cookery. The famous French cooking school confirmed that it had agreed to be a beta site for the much discussed Food for Windows application sweet.

**Thursday, 9 AM** — New York—PCWeek Magazine reported in a copyrighted story that it had obtained a copy of correspondence from Microsoft to Cuisine International, demanding that the small developer of kitchen software cease using the Cuisine name, as it infringes on the trademark for Microsoft Food for Windows NC. Microsoft added that Chairman Mark Meigs would also have to change his own name as Mark infringed a copyright on the Windows Edit menu, Meigs infringed the trademark on Meigs Field in Microsoft Flight Simulator, and Chairman infringed the trademark on Bill Gates' title which he had acquired with personal funds from Mao's estate. Also, Microsoft advised that while the company did not actually have to move out of Chicago, use of the name on press releases infringed a trademark on Windows 4.0

**Thursday, 4 PM** — New York—Cuisine International stock closed at 0-bid, 1/16-asked.

**Friday, 9 AM** — ? —An anonymous spokesman for an unnamed Midwestern software developer announced the discontinuation of operations. Undescribed legal problems were cited as the reason. Others speculated that a failure to appreciate the competitive nature of the software business may have led to the company's sudden collapse.

**Monday, 9 AM** — Microsoft Internal Mail

From: billg

To: mikem

Re: Food Program

Please see if you can reassign one of the 3000 engineers from the OS/2 virus development project to do a feasibility study on a food-related program. Not sure what it would do. Low priority.

*The two most frequent changes to this document are the lowering of the number of the engineers working on the virus program from 3000 to 667, and the lowering of Bill Gates's personal investment from \$250 to \$75.*

*This document has not only achieved the status of folklore (NET-lore), but is already a classic. As with most folklore, the orientation is mostly satirical. The interesting aspect to electronic folklore is the easily editable nature of the document.*

*Still, there is enough respect for the authors of these gems to keep them mostly intact. While minor changes have been made over the life of this document, the humor has not been altered. There will be a lot of chuckles over the next decade as NET-lore goes into full swing. ■*



© 1992 by John C. Dvorak. All rights reserved. John C. Dvorak graduated from the University of California. He is a contributing editor of PC Magazine and MacUser, and is considered by many to epitomize the contrarian view of things—a charge that he vehemently denies. Dvorak's motto is: If you have nothing nice to say, then don't say anything at all.



# Savings Headquarters

## FRY'S AND HP KNOW HOW TO MAKE WAVES!



**HEWLETT  
PACKARD**

*Authorized Dealer*

*A 50 YEAR TRADITION OF QUALITY.*

*HP DELIVERS PC PRODUCTS YOU CAN DEPEND ON.*

### DeskJet 500C Color InkJet Printer

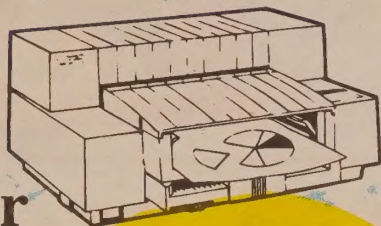
**COLOR INKJET OUTPUT AT 300 DPI!**

Prints in Color or  
Black and White

100 Sheet Paper Feeder

Whisper Quiet

3 Year Warranty #1632480



**\$398<sup>95</sup>**

### Color PaintJet

**XL300**

**HP C2856A**

**Color Graphics  
Ink Jet Printer**

300 DPI Plain Paper

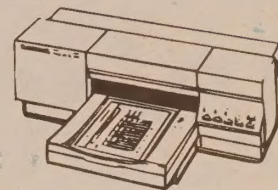
200 CPS NLQ

Prints on Transparency

Film & Paper

360 Colors addressable,  
over 16.5 million color  
available

#1688986



**\$2199<sup>99</sup>**

### LaserJet 4

Fast 8ppm printing for complex documents

45 Scalable Fonts • 2MB RAM

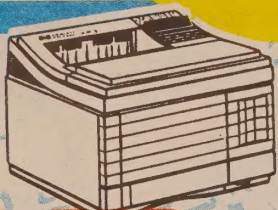
600 DPI Print Quality at a 300 DPI Price

300 Page Paper Capacity

Ideal for Windows & Graphics

Optional Full Network Capabilities

#1734140



**CALL FOR  
BEST PRICE**

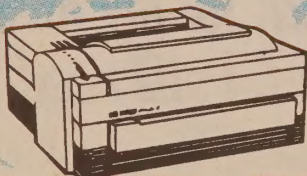
### LaserJet 4L

• 26 built-in scalable typefaces let you shrink and enlarge type  
to thousands of sizes.

• 300 DPI Laser printing with HP Resolution Enhancement  
technology and microfine toner for smooth, sharp text and  
graphics.

• 1MB standard memory with Memory  
Enhancement technology effectively  
doubles your printer memory.

#1786963



**\$657<sup>95</sup>**

### DeskJet 500 Inkjet Printer

300 DPI LASER QUALITY

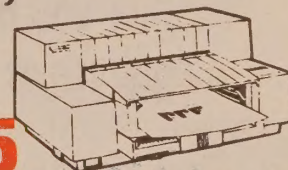
Scalable Fonts for MicroSoft Windows 3.0

Water Resistant Ink

Character Kerning for Improved Letter Spacing

Whisper Quiet • Three Year Warranty

#1529128



**\$298<sup>95</sup>**

### DeskJet Portable Inkjet Printer

300 DPI portable printing for both text and graphics.

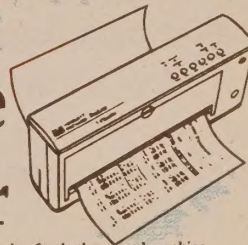
Fast - up to 3 pages per minute.

Small, lightweight and easy to carry.

Four portrait and two landscape typeface built-in.

84 typeface, size and style combination.

#1733714



**\$349<sup>95</sup>**

### LaserJet 4Si

**THE**

**PERFECT  
NETWORK  
SHARED  
PRINTER!**

• Expandable and flexible, excellent for networks

• Fastest HP LaserJet printer at 17 ppm

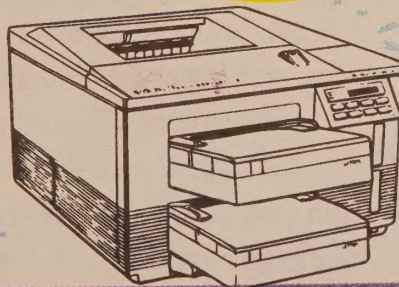
• Multiple language capability with auto switching

• True 600 x 600 dpi printing with RETand microfine toner

• 75,000 page/ month duty cycle and flexible paper-handling

• HP quality and reliability

#1779583



### DeskJet 550C Color InkJet Printer

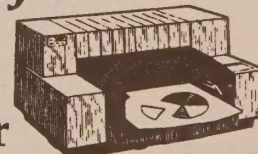
**COLOR INKJET OUTPUT AT 300 DPI!**

Prints in Color or Black and White at the same time

100 Sheet Paper Feeder • Serial/Parallel

13 Scalable Fonts for Windows • 84 DOS Fonts

Whisper Quiet • 3 Year Warranty #1733703

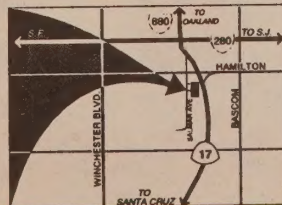


**\$599**

**Fry's**  
**ELECTRONICS**  
*Home of Fast, Friendly,  
Courteous Service*  
Prices good thru  
October 11, 1993  
Limit Rights Reserved  
Not Responsible For  
Typographical Errors

**HOURS:**  
**MON-FRI**  
**8AM-9PM**  
**SATURDAY**  
**9AM-8PM**  
**SUNDAY**  
**9AM-7PM**

**VISA AND  
MASTERCARD**



**SUNNYVALE**  
1177 Kern Ave. (408) 733-1770  
CORPORATE P.O. FAX#  
(408) 735-6800

**CAMPBELL**

600 E. HAMILTON AVE.  
(408) 364-3700  
CORPORATE P.O. FAX# (408) 364-3790

**FREMONT**

440 Mission Ct. (510) 770-FRYS(3797)  
CORPORATE P.O. FAX#  
(510) 770-3700

**PALO ALTO**

340 Portage Ave. (415) 496-6000  
CORPORATE P.O. FAX#  
(415) 496-6044



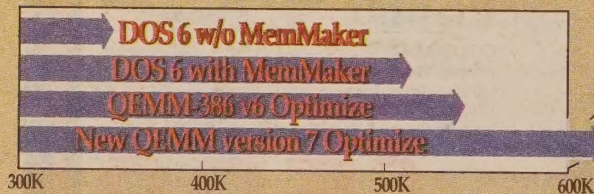
# QEMM 7 finds room nobody else can.

Sooner or later, you'll get an  
"Out of Memory" message.  
Whether you have  
1 megabyte or 16.

TSRs and network utilities need memory right where your programs need it, too. It's called 'lower' or 'conventional' memory.

Adding RAM to your PC just gives you more expanded or extended memory — accessible to some programs, but not to TSRs like fax utilities, device drivers or network utilities like Novell NetWare. Fortunately, there's an easy software solution to 'out of memory' problems.

**Have Your Cake and Eat it, Too.**  
The more memory you have, the more flexibility and reliability you can enjoy. Thanks to



We tested DOS with and without MemMaker and with QEMM 6 and our new QEMM 7 runs away from all of them. See details of test conditions below.



How we got the chart numbers: CPU—486/33 ALR Power/business VESA machine equipped with 16 megs of RAM and running MS-DOS 6. Comparisons were done using the following memory managers: QEMM 7, QEMM 6.02, MS-DOS 6 MemMaker. In addition to the driver (or drivers) required by each memory manager, the following drivers, DOS resources and programs were loaded for all comparisons: in the CONFIG.SYS file: SETVER, EMBL, DOS-HIGH, FILES=20, BUFFERS=10, STACKS=0,0, MVSOUND.SYS, SNDIRK2.SYS, SLDOSYS, DOS SHELL statement in the AUTOEXEC.BAT file: VSAFE, MSKDEX, UNDELETE, LSL.COM, NE2000.COM, IPXODI.COM, NETX OR EMSNETX, MOUSE.COM, SMARTDRV.COM, PRISCCAP.COM.

our patent-pending 'stealth' technology, QEMM finds as much as 96K more high memory than other memory managers.

No one has yet been able to match our performance. No wonder QEMM outsells all the others *put together!*

QEMM™ puts the maximum memory right where your favorite programs need it so you

**"I needed another 32K for my favorite TSR. I added 2 megabytes. I still need 32K! What gives?"**

can run them and TSRs without 'out of memory' problems or conflicts. That keeps your PC running smoothly and performance at its best.

**Protect Your Productivity;  
Keep Your Work Safe.**

Any task, from programming to writing the company business plan to composing a personal letter, takes time and thought. Your PC is supposed to make that process easier; your output better. When you can't run your favorite grammar-checking TSR or have to get by without a vital network utility, you're sacrificing productivity.



QEMM comes with the new version of Manifest, the award-winning memory analyzer that helps you see how your PC works.

It's the utility that finds memory when nothing else can.

Whether you're running MS-DOS, IBM® PC-DOS, DR DOS, Novell DOS or MS Windows; one megabyte or eight, don't sacrifice; don't compromise; don't risk losing work.

Managing your memory well is the best way to assure your work won't go to waste.

QEMM version 7 is the most powerful, flexible memory manager you can buy.

VACANCY

## Quarterdeck

Quarterdeck Office Systems, 150 Pico Boulevard, Santa Monica, CA 90405 (310) 392-9851 Fax (310) 314-4219

CompUSA  
San Bruno (415) 244-9990  
Santa Clara (408) 554-1733

Fry's Electronics  
Sunnyvale (408) 733-1770  
Palo Alto (415) 496-6000  
Fremont (510) 770-3797

800-Software  
Berkeley (800) 888-4880

Egghead Discount Software  
Throughout the Bay Area

©1993 Quarterdeck Office Systems. Trademarks are property of their respective owners.